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Academic Integrity

A Call to Research and Action



Michelle Bergadaà, Paulo Peixoto (Editors)

IRAFPA

Institute for Research and Action
on Fraud and Plagiarism in Academia

Globethics

Academic Integrity

A Call to Research and Action

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Michelle Bergadaà / Paulo Peixoto (Editors)

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This book is the culmination of the work carried out within IRAFPA over the past five years. It is a collective work anchored in the authors' will to surpass themselves in the face of the dangers that threaten our profession.

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Needless to say, we thank the authors who are accompanying us in this collective adventure: we are proud of each other! We also thank everyone who, without writing a chapter, contributed orally or in writing to the broad democratic debate that we have established. In particular, we would like to thank all the participants of the IRAFPA Summer Schools, who passionately continue our debates on academic integrity.

We are particularly grateful to our publisher, Gaël Letranchant, who agreed to welcome us in EMS's *Questions de société* collection, published the original French version of this book, and facilitated the publication of the English version of this book. We thank Ernest Moret (for the French version) and Zofia Laubitz (for the English version), who took a great interest in our writing and meticulously corrected our proofs. We are also grateful to Christoph Stükelberger, Ignace Haaz and Globethics Publications for their enthusiastic acceptance of the proposal to publish this book in English.

We also thank the victims of knowledge delinquents who trusted us in mediation and who, over the years, allowed us to develop a benevolence toward all and to create pragmatic institutional arrangements to curb fraud and plagiarism and to pacify communities.

And, of course, our gratitude goes out to all our colleagues who never talk about integrity, but who simply live it and make it happen every day.

INTRODUCTION – ACADEMIC INTEGRITY: AN URGENT PRIORITY

*M. Bergadaà and Paulo Peixoto**

I have been impressed with the urgency of doing.
Knowing is not enough; we must apply.
Being willing is not enough; we must do.

Leonardo da Vinci

Urgency is a term that runs the risk of being vague and inconsequential in our society, in which immediacy prevails. If there is no sense of priority, then when everything is urgent, nothing is urgent. John le Carré's syllogism in *A Murder of Quality* reflects this characteristic: 'What is important is seldom urgent. Urgent equals ephemeral, and ephemeral equals unimportant'. The sense of urgency, however, assumes another form if it arises in a medical, economic, or environmental context. For a situation becomes urgent when there is a threat to human existence and activity. Today, it is our knowledge-based civilization that is threatened both by new production models and by the shamelessness of knowledge delinquents.

* Corresponding authors: M. Bergadaà and P. Peixoto. To quote this chapter: Bergadaà, M., Peixoto, P., "Introduction –Academic Integrity: An Urgent Priority" in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.17-23, © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

In an emergency, the temporal dimension calls for full awareness of our responsibility. This is the meaning of the epigraph by da Vinci at the beginning of this text. Of course, emergencies have different levels of importance, and the more serious the situation, the more *tempus fugit*. Urgency can be broken down into an equation with a negative correlation between the seriousness of the situation, on one hand, and a time course that requires rapid decision-making, on the other. Moreover, the more negative this correlation is, the more imperative the exceptional nature of the action becomes. Unfortunately, urgency has become so hackneyed in recent decades that it is now often associated with the need for rapid intervention. But there is no point in trying to act and hoping that the urgency will go away. Integrity will always be urgent—permanently.

We are aware of the many efforts that have been made around the world in recent years to strengthen academic integrity and counteract malpractice. We ourselves contribute to these efforts by conducting theoretical and applied research to improve the knowledge structuring the concept of academic integrity. We also support the development of institutional policies by accompanying the implementation of organizational arrangements and by issuing certifications. IRAFPA (Institute of Research and Action on Fraud and Plagiarism in Academia) also conducts numerous mediations to help victims and integrity officers to pacify communities by proposing reparations that satisfy everyone. And, of course, we organize summer schools and offer open-access programs and video clips to transmit our expertise.

But this is not enough. We need to start a real debate and invite all players in the academic world and outside stakeholders to join in so that the integrity science movement develops and takes root in everyone's daily practices. The motivation underlying this book on academic integrity, which has brought us all together at IRAFPA since its foundation, is not just the conviction that there is an urgent need, but

also the priority given to the effective conditions for action. This book starts from this challenge and openly accepts this commitment. The word *action*, which is part of IRAFPA's DNA, and its name, acquires its true meaning and scope here. We wanted the book *The Urgency of Academic Integrity* to be a reference tool for anyone who wants to strengthen academic integrity and needs to know how to act without wasting time.

This book has a life of its own. It was really born before we even thought of writing it. The network of partners we built when IRAFPA was created on 18 June 2016, and the initiatives developed over the following years, have given rise to a forum of ideas that are constantly on the boil. It was in the midst of the pandemic, on the last two days of October 2020, at our conference in Coimbra, that we decided to publish this book. It was by understanding our differences, our complementary perspectives in our different disciplines, and also the feeling of loneliness experienced in our institutional universes or scientific associations that we realized: we wanted to create an international, interdisciplinary scientific meeting place to promote democratic debate on integrity and its opposites: fraud and plagiarism.

Thus, publishing this book on the occasion of IRAFPA's fifth anniversary represents the fulfillment of the mission we set ourselves when the Institute was founded, as well as a door to the future. Our research question was formulated as follows: how should we lay the foundations for a genuine democratic debate on academic integrity? Three steps were taken to create this book.

The first step was to undertake to crack the codes and open the borders of different mental and physical universes. Indeed, it is more than seventeen years (31 March 2004) since the first letter on integrity was sent out (it is now distributed to more than 17,000 subscribers). We met many, many people of good will, but they had no opportunity to understand each other. Either they belonged to different worlds or they

responded to different logics. For example, journalists—even investigative journalists—and scientists are unlikely to have the same objectives. And some members of the academic world feel ‘obliged’ to defend their errant peers, while others want to denounce ethical misconduct with all their might, regardless of the consequences for the working climate in their own environment.

We therefore needed to promote a democratic debate that would not be limited to a group of researchers and actors who were directly linked to IRAFPA. Interdisciplinarity and the free confrontation of ideas coming from different professional and scientific fields encourage intellectual respect and an authentic dialectic. For we must dare this dialectic which allows us to say with Gurvitch that our real task is ‘to demolish all acquired and crystallized concepts, with a view to preventing their mummification, which comes from their inability to grasp the real totalities in motion while simultaneously considering the wholes and their parts’.¹ It is not merely by chance that this book promotes an intense dialogue between the twenty-five chapters that make it up and a debate, within each of its themes, between authors who had had little chance to compare their points of view.

The second step in the production of this book was its structuring. This was resolved following our discussions during the various collective work sessions. The book is structured around five major themes. Each of them is introduced by a renowned researcher who first highlights the theme before presenting each of the contributions that make it up. Interdisciplinarity, our leitmotif, is again fostered here since our five ‘leaders’ come from the fields of science, medicine, journalism, archaeology, management, sociology, and international diplomacy.

The first theme concerns ‘Restoring academic confidence’. Since numerous cases of fraud and plagiarism have been revealed in the press in many countries over the last few years, it seemed to us that the first

¹ G. Gurvitch, *Dialectique et sociologie* (Paris: Flammarion, 1962), p. 20.

priority was to rebuild trust. Without this trust, we risk discouraging many valuable young colleagues and doctoral students, and civil society will tend to have less respect for the search for truth that we pursue in favor of freely circulating fake news. This chapter is introduced by Michel Kalika, Professor Emeritus of Jean Moulin University (Lyon, France), but also President of the Business Science Institute, an international DBA program, which gives him a front-row seat when it comes to understanding how our interpretation of the foundational term *trust* may vary from culture to culture.

The second theme, ‘The role of publishing in the urgency of integrity’, continues to challenge us at a time when our academic order, based on publication, is being shaken by multiple retractions of articles published by even the best journals, as well as by a conflict between the various modes of disseminating our work. We asked Pierre Hoffmeyer to introduce this theme. He is in a privileged position of observation as he has been the President of the Swiss Orthopaedic Association and of the European Federation of National Associations of Orthopaedics and Traumatology (EFORT). He is also a member of the editorial boards of several important journals and is editor-in-chief of *EFORT Open Reviews*.

With the third theme, ‘The reciprocal powers of the legal and academic orders’, we get to the heart of why people and systems are unable to overcome challenges related to integrity. For these two worlds are constantly passing the responsibility for actually handling integrity violations over to each other. To introduce the theme and present the authors, we asked Marian Popescu, from the University of Bucharest, who is the founder and director of CARFIA (Center for Action, Resources, Training for Academic Integrity at the University of Bucharest). He has a long history of exposing the biggest academic fraudsters in Romania, some of whom have ended up as government ministers thanks to a very tolerant political system.

The fourth theme, ‘Toward an institutional culture of integrity’, addresses possible solutions that could—or should—be implemented with determination. We asked Jacques Hallak to introduce it and present the authors. This French diplomat of Lebanese origin holds two doctorates. He worked for many years as Director of IIEP (International Institute for Educational Planning) at UNESCO. There he had to directly deal with problems of ethics and corruption. The strong message he gives us in his introduction is that we must act pragmatically and without naivete in effectively implementing these institutional arrangements.

The fifth theme encourages us to ‘Rethink integrity training in times of change’. This is not about the training of students. Let’s stop dividing the academic population into students, on one hand, and researchers, on the other! In these times of profound change, training is relevant to professors, librarians, ethics commissioners, and legal departments, as well as students. Jorge Onrubia Pintado introduces this topic and its authors. He is director of the Laboratory of Archaeology, Heritage and Emerging Technologies at the University of Castilla-La Mancha (Spain). He provides us with an incisive overview that helps to frame this cross-cutting theme.

The third stage of the rocket in the creation of this book allowed us to put our appetite for collaborative work into practice. Why did thirty-four authors from ten different countries agree to contribute to this book? Some of them participated in the IRAFPA colloquium at the University of Coimbra in October 2020, while others were asked to contribute their expertise in one of the six themes. Thirteen authors were disappointed not to be included in this book; they simply did not have the time to produce a cogent article and we hope to welcome them in future work. The authors of this book all present original concepts that stimulate us and open up new horizons. All of them agreed to undergo a rigorous review process, sometimes rewriting large parts of their papers

and going the extra mile in their arguments. All the authors—including the two editors of the book—have changed in the course of these exchanges. This is what respectful, uncompromising debate is all about, and it helps to advance knowledge.

What else can be said about these authors and committed fighters for integrity? Fifty years separate the youngest author from the oldest; their passion for integrity has brought them together in this book. That shows that this is the story of a lifetime of research. The authors come from more than ten different countries, for integrity knows no boundaries. They are theologians; philosophers; psychoanalysts; psychologists; economists; linguists; sociologists; archaeologists; lawyers; engineers; professors of ethics, bioethics, artificial intelligence, education, performing arts, humanities, nuclear and particle physics, ethnology, and history; journalists; diplomats; business leaders; doctors; translators; political scientists; and members of civil society.

The movement we are promoting together—that of the sciences of integrity—calls for the implementation of rigorous concepts and the sincerity of such courageous intellectuals and players. We hope that readers will have as much pleasure in reading their proposals as we had in discovering or rediscovering them. For it is a real pleasure to discuss such an important issue with colleagues possessing such intellectual and human qualities!

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RESTORE ACADEMIC TRUST

INTRODUCTION

*Michel Kalika**

In our eyes, the restoration of trust in academia is a strategic challenge that academics and the institutions of which they are the basis absolutely must take up today. If this does not happen, academics will have to face the consequences tomorrow. This conviction is based on my dual experience with the study of the impact of academic organizations (Business School Impact System—BSIS) and the creation of a doctoral institution that is unique in its operations and its purpose (Business Science Institute).

The grid to analyze the impacts of an academic institution, which was developed by the French Foundation for Management Education (FNEGE) and the European Foundation for Management Development (EFMD) and is widely used by the major engineering and management schools and, more recently, by universities as well, can serve as a guiding principle in understanding the necessity of restoring trust in

* Corresponding authors: M. Kalika. To quote this chapter: Kalika, M. “Introduction” in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, Geneva: Globethics Publications, 2023, pp.27-32, © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

academia.² If a firm intent to do this is not part of institutions' strategic agenda, if the prevalence of fraud and lack of integrity is not resolutely combatted, then I foresee seven negative impacts, resulting in a long-lasting detrimental effect on institutions' reputation and role. The first negative impact is intellectual: without trust in researchers' work, attention to the outcomes of research is considerably reduced, even destroyed, and without trust within institutions, the collective research dynamic is affected. The second negative impact is educational: without trust in academia, doubt is cast on the quality of teaching, which ought to be nourished by research; *ipso facto*, graduates' credibility and their role in society will be undermined. The third impact relates to the development of the economic fabric that depends on research, in the case of innovation, and education, in the case of management. The fourth affects the ecosystems within which academic institutions play a leading role in terms of research, innovation, and training—ecosystems that are developed by means of partnership contracts that create synergies with trustworthy researchers. The fifth concerns the sustainable development of our societies: if the public no longer trusts academics, then research on the sustainable development of our economies and societies will quite simply lose its credibility and effectiveness. The sixth negative impact is, of course, financial: public- and private-sector funding organizations will permanently turn their backs on academic institutions that are compromised by plagiarism and a lack of academic integrity. Finally, the seventh impact relates to the image, profile, and reputation of the academic institutions that societies need, since they transmit fundamental values. To sum up, the entire profession's legitimacy is damaged in the eyes of the public.

We have therefore made academic integrity one of the foundations of the international academic organization we created to launch a Doctorate

² M. Kalika and G. Shenton, 'Measuring Business Impact: The Lessons from the Business Schools', *Corporate Governance*, 21(2) (2020), 268-78.

in Business Administration (DBA) degree for managers.³ What basis can an institution ‘without walls’ that brings together more than a hundred international professors from diverse countries, origins, cultures, and academic domains and two hundred manager-candidates from some forty countries who work in three languages have, other than trust in a collective academic project? The creation of a broad community of international academics who are invested in a unique and disruptive project can only be understood if we consider the fundamentally integrative role of trust in academia—the mortar holding this network together. In the beginning, this institution, which was created from the ground up, had no recognition, no accreditation; nevertheless, it succeeded in bringing eminent professors together and building international academic partnerships on the basis of academic trust. It was trust again that overcame the improbable challenge of uniting the instructor-researchers of an organization that is, by its very nature, scattered and geographically dispersed around a common goal. And it was trust in these renowned professors that led doctoral candidates to believe in this extraordinary project, to register, to defend their DBA theses and to publish books representing the results of their research.

The five chapters that make up this section encourage us to consider that academic integrity, like any managerial activity, presupposes values, processes, controls, and impact measurements. Measuring the impact of what academic institutions do to ensure academic integrity requires us to identify the resources that they devote to this, their actions or activities, the immediate results, further achievements triggered by these actions, and sustainable changes—in other words, the impacts that

³ M. Bergadaà and P.-J. Benghozi, ‘Contribuer de manière significative à l’avancement des connaissances dans un champ d’exercice professionnel’, in *Entrepreneur à l’université : Mélanges en l’honneur de Michel Kalika*, ed. by J. Desmazes and others (Caen: Éditions EMS, 2019), pp. 293–304.

are reflected in behavioral changes. We are sure that reading these articles will induce many of us to join the authors in enlisting in this scientific campaign for integrity with a view to restoring trust in academia, in all of its many dimensions.

The article by Michelle Bergadaà and Paulo Peixoto is based on the investigations carried out by the Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA) in 2020, the results of which raised a question that, although facetious, is undeniably anxiety-provoking: ‘Academic integrity advisers: Do they have confidence in themselves?’. The two authors examine the role of academic ethics officers and the difficulties they face in their institutions; to understand these issues, the authors propose to move forward from trust, a concept they describe as elusive, to the more operational concept of proximity. This proximity of academic players must be understood both at the interpersonal level of identity and networks and at the institutional level of processes and technology. In this chapter, the authors hope for a fifth kind of proximity—functional proximity—emphasizing the role IRAFPA has played in developing the necessary interpersonal proximity among academic ethics officers.

In their article ‘Academic integrity in Spanish higher education: Three parallel worlds’, Cinta Gallent Torres and Isabel Tello Fons give us an unsparing description of the situation in Spain in regard to academic integrity: students and junior researchers, who are subject to the pressure to publish and unprepared for academic writing, prove to be frequent plagiarists, encouraged by a series of services from specialized websites, a lack of sanctions, and the short-sightedness of universities, which have little real idea of the scope of the problem. The picture presented would be worrying if we were not called upon to consider the possibility of reconciling three worlds that appear to be foreign to each other: those of students, researchers, and universities. And the authors point out that efforts are being made to increase awareness.

In her article ‘A diplomatic view for research integrity’, Sarah Carvalho, a philosopher of science, encourages us to reflect on the lack of an international, interdisciplinary consensus concerning scientific integrity, as a result of cultural factors. According to this author, the definition of unacceptable conduct varies as a function of culture. After all, academic integrity cannot aspire to the same universality as mathematics. The author suggests three promising avenues for reconciling cultural and professional differences with academic integrity: standards, frameworks, and systems of sanctions; the creation of an ethical metaculture; and, most of all, a ‘diplomacy’ of scientific integrity in intercultural situations.

Pierre-Jean Benghozi covers the issue of academic integrity by focusing on this specific period, when the training of tomorrow’s researchers is being initiated, in his article ‘What models of integrity should doctoral schools apply?’. Because they occupy a unique position in higher education, doctoral schools must set an example. The author proposes that IRAFPA’s ‘integrity’ certification be adapted to doctoral schools. For example, a doctoral school’s integrity certification depends on the development of an integrity charter, the involvement of management teams, the identification of an integrity officer, a communication policy, adherence to practices, training for trainers and students, and a process for handling infractions, accompanied by sanctions. This rigorous presentation of the institutional tools available to fight against the most frequent breaches of integrity (fraud in knowledge production, in publications, and in thesis supervision) is reassuring.

Finally, in his article ‘Accountability through integrity: Toward a balanced education’, Christoph Stückelberger appears to reply by taking us on a voyage in quest of values and virtue. With his long international experience as an ethics trainer, he emphasizes that lack of integrity, corruption, and fraud are rampant in higher education, and he mentions

the binding force of collective values and the role of virtues, as benchmarks for individual behavior. In this author's view, integrity—and academic integrity is just one illustration—consists in complying with one's own values and convictions. Academic integrity is particularly important given that education constitutes the 'pillar of values in society and the foundation of a society's future'. The author concludes his article by presenting integrity as the alignment of four factors: responsibility, competence, ethics, and control over corruption.

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ACADEMIC INTEGRITY ADVISERS: DO THEY HAVE CONFIDENCE IN THEMSELVES?

M. Bergadaà and Paulo Peixoto

Abstract

This chapter presents the results of an international survey of “academic ethics officers” (AEOs), mainly integrity officers, ombudsmen and directors of doctoral schools. In view of the diversity of proposals put forward by the respondents, the authors wonder about the possibilities of increasing their self-confidence in a changing world. The object of the research must be defined: trust. A semiotic analysis of the *verbatim*s makes it possible to induce a model with five dimensions to which the GDRs feel more or less close, and therefore mobilised in a variable way: identity proximity, network proximity, process proximity, technological proximity and functional proximity. For each of these dimensions, observations are made and proposals are made as to what IRAFPA can or cannot do to reinforce them*.

* Corresponding authors: M. Bergadaà and P. Peixoto. To quote this chapter: Bergadaà, M., Peixoto, P., “Academic Integrity Advisers: do they have confidence in themselves?” in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.33-57, DOI: 10.58863/20.500.12424/4271541 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

1. Introduction

We all know that only a minority of cases of fraud and plagiarism come to light and that nine-tenths of the iceberg remains invisible. But the disturbing question is not how many cases slip through the cracks. There would be no point in putting our skills as observers of the academic world to work revealing these facts. The question, for us as researchers in the field of integrity, is how to help the men and women who have chosen to become ‘academic integrity advisers’ (AIAs) to fulfill their mission.

What do we mean by academic integrity advisers? There is very little research to define their function and the role they play in the academic community. Bramstedt classifies what she calls ‘integrity officers’ into three categories—*watchdogs*, *lap dogs*, and *dead dogs*—depending on their degree of involvement in their function.⁴ In her view, all integrity officers may suffer if institutional actions seem to run contrary to their personal ethics. She found that loyal, reliable, and hard-working *watchdogs* may also experience moral distress at being unable to deliver good-quality service to whistleblowers, victims, and academic authorities. Whether they are ombudspersons, *référénts intégrité* in French institutions, directors of doctoral schools, chairpersons of disciplinary committees, directors of copyright offices, etc., we find that AIAs do not always feel significantly supported by their institutions when confronted with the consequences of growing and sophisticated delinquency.

When we conduct mediations in France, we are in close contact with the *référénts intégrité*, who are people appointed by each university to deal with cases of fraud and plagiarism and to ensure that regulations are applied. Although they are sincerely committed to the defense of ethics

⁴ K. A. Bramstedt, ‘Integrity Watchdogs, Lap Dogs, and Dead Dogs’, *Accountability in Research*, 28(3) (2020), 191-95.

in the professional field of higher education and scientific research, their discomfort with the difficulty of acting sometimes leads them to disengage or resign from their jobs. For example, when we build up evidence files to help victims assert their rights, we frequently witness their surprise at the denial (and often anger) of their delinquent colleagues or superiors. So, beyond the support of their institution, it is not personal courage that matters. What matters is possessing the key to mobilizing systems and people. That key is the ‘confidence’ they have in themselves and in their real possibilities for action.

Yet, the academic world is based on trust. Richard Horton, editor of *The Lancet*, in the midst of a storm over the retraction of a fraudulent paper in August 2020, wrote: ‘We trust what the authors of scientific papers tell us... If they tell us there is a database and they sign a statement saying they are reliable, we trust them, as do the external reviewers we ask to assess their work’.⁵ So let’s talk about trust. In a world of symbolic violence, is reinstating integrity at the heart of our academic system a pipe dream or a real possibility?

In this chapter, we examine the concept of trust as a driving force in relationships between stakeholders, but also as a cognitive and affective tension that transforms motivation into a willingness to engage in order to strengthen academic ethics.⁶ We have explored what the anchors of this trust are in an uncertain universe, characterized by fuzzy information and imperfect regulatory situations and standards. To attempt to formulate an answer, we questioned AIAs with two open-ended surveys and asked witnesses to write about their experiences and

⁵ H. Morin and P. Benkimoun, ‘Richard Horton, patron du “Lancet”’: “Le COVID-19 montre une faillite catastrophique des gouvernements occidentaux”’, *Le Monde.fr*, 20 June 2020.

⁶ J. B. Smith and D. W. Barclay, ‘The Effects of Organizational Differences and Trust on the Effectiveness of Selling Partner Relationships’, *Journal of Marketing*, 61(1) (1997), 3-21.

doubts concerning the topics discussed at our last conference in Coimbra, 30–31 October 2020.

2. From the elusive concept of trust to the pragmatic concept of proximity

At IRAFPA, we are wary of vague terms. Vague due to being overused, vague due to hopes that never become reality, vague due to actions rarely carried through to completion. *Trust* is one of those vague terms: Google Scholar shows us more than 700,000 references to *confidence* and more than 3 million references to *trust*. Fortunately, we have learned to handle our languages of expression. For we have three languages in our profession as researchers: our mother tongue for thinking; English (or perhaps *globish*) for publishing; and the implicit. The implicit is to our profession what *saudade* is to the Portuguese. It is the language of our *omertà*. It is ‘everyone knew so-and-so was a fraud’ when so-and-so ends up being convicted. It is the subtle phrase: ‘That guy has no morals’, which translates into ‘He’s an ambitious man who tramples his colleagues to succeed’. Building the IRAFPA corpus entails constantly analyzing this third language to flush out the gray areas of our profession, before validating the concepts that we integrate into our discourse.

In order to work on the concept of ‘trust’, we proceeded as usual with an interdisciplinary literature review. Most definitions present trust as a belief or as a positive expectation of the partner.⁷ But perspectives

⁷ On belief, see J. B. Rotter, ‘Generalized Expectancies for Interpersonal Trust’, *American Psychologist*, 26(5) (1971), 443-52; P. H. Schurr and J. L. Ozanne, ‘Influences on Exchange Processes: Buyers’ Preconceptions of a Seller’s Trustworthiness and Bargaining Toughness’, *Journal of Consumer Research*, 11(4) (1985), 939-53. On expectation, see P. M. Doney and J. P. Cannon, ‘An Examination of the Nature of Trust in Buyer-Seller Relationships’, *Journal of Marketing*, 61(2) (1997), 35-51.

vary according to the aims of specific disciplines. For example, in social psychology and sociology, researchers emphasize that trust is the foundation of any exchange.⁸ It is therefore an essential factor for the stability and continuity of the relationship over time.⁹ In economics, for authors such as Dasgupta, trust is a construct that originates in a cognitive calculation.¹⁰ Trust is also a conscious, coordinated development.¹¹ All these definitions of trust situate it as a variable intervening between a deep motivation and an effective behavior. This does not help us conceptualize it.

How can we help academic ethics officers to increase their self-confidence if we do not know how to express the pragmatic dimensions? If we refer to Peirce, we are able to distinguish, for the reference *object*, the signified that this term refers to in our universe from its signifiers, namely the signs that our respondents give us to interpret.¹² The subtlety

⁸ In social psychology, see M. Deutsch, 'Trust and Suspicion', *Journal of Conflict Resolution*, 2(4) (1958), 265-79; R. Lewicki and others, 'Trust in Relationships: A Model of Development and Decline', in *Conflict, Cooperation and Justice*, ed. by B. B. Bunker and J. Z. Rubin (San Francisco: Jossey-Bass, 1994), pp. 132-73. In sociology, see J. D. Lewis and A. Weigert, 'Trust as a Social Reality', *Social Forces*, 63(4) (1985), 967-85.

⁹ L. Karpik, 'Dispositifs de confiance et engagements crédibles', *Sociologie du travail*, 38(4) (1996), 527-50.

¹⁰ P. Dasgupta, 'Trust and Cooperation among Economic Agents', *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1533) (2009), 3301-09.

¹¹ V. Mangematin, 'La confiance: Un mode de coordination dont l'utilisation dépend de ses conditions de production', in *La confiance: Approches économiques et sociologiques*, ed. by C. Thuderoz, V. Mangematin and D. Harrisson (Montreal: Gaëtan Morin Éditeur, 1999), pp. 31-56; S. L. Jarvenpaa, K. Knoll and D. E. Leidner, 'Is Anybody Out There? Antecedents of Trust in Global Virtual Teams', *Journal of Management Information Systems*, 14(4) (1998), 29-64.

¹² C. S. Peirce, *Écrits sur le signe*, trans. by G. Deledalle (Paris: Éditions le Seuil, 1978).

of inductive qualitative analyses lies in the distinction between the *index* (or clue) that shows the direct connection with the object and the *iconic* remark that denotes the sender's proximity to the designated object. For example, many of our respondents spontaneously replied 'laws and regulations' when asked about their means of action, while others pointed to the peers with whom they discussed their cases. And identifying the *symbol* they used in their answers when telling us about a case or answering an open question requires a detailed knowledge of the culture that we do not always have. For example, in France, anonymous denunciations are still very much associated with collaboration with the enemy during the last world war. Anonymous whistleblowing is therefore not tolerated. On the other hand, *omertà* is widely accepted because it is linked to the privilege of those who are highly placed enough to be 'informed', in a country that remains attached to 'royal' attributes (despite having cut off the head of a king).

So the question is, in a world of fraud and plagiarism far removed from their values, what tools do they feel most able to act with (or upon)?

In their literature review, Knoben and Oerlemans identified the roots of the concept of proximity, which can be: geographical, organizational, cultural, institutional, cognitive, technological, and social.¹³ The English-speaking world often seems closer to organizations: inclined to act according to regulations, standardized processes, and formal devices. In other, more Latin, nations, one will look first for interpersonal proximity to discuss academic ethics. We also found that, depending on the culture of the place where they obtained their doctorate, our interlocutors also felt more spontaneously attracted to one or other of these dimensions, and they sometimes found themselves in a state of

¹³ J. Knoben and L. A. G. Oerlemans, 'Proximity and Inter-Organizational Collaboration: A Literature Review. *International Journal of Management Reviews*, 8(2) (2006), 71-89.

cognitive dissonance with their closest colleagues once they returned to their country of origin. For it is difficult to communicate if the corpora are different, and this misunderstanding can be the source of some symbolic violence. The aim of our research (see box below) is to present the shared dimensions of this trust that all AIAs need in order to be able to communicate and act.

IRAFPA's studies in 2020

We conducted a survey (using open-ended questionnaires) of ombudspersons and people involved in the management of integrity-related conflicts and mediation cases, as well as heads of doctoral schools. Our investigation covered a panel of experts located in Canada, Brazil, Switzerland, France, Portugal, and Romania, in January and February 2020. The open-ended questionnaire consisted of twenty-one questions covering six themes: theme 1: identification of facts; theme 2: institutional guidelines; theme 3: internal and external communication; theme 4: monitoring and control; theme 5: training of faculty and students; theme 6: complaints handling and mediation.

A first general observation is that a response rate of 20% can be considered low, with a panel of people identified as being in a position of responsibility, such as heads of doctoral schools. Some of them pass the buck to other managers: 'There are optional or compulsory integrity courses a few hours long and that seems to them to be enough' or 'I inform the commissioner of offences'. Many simply say that they cannot answer because they do not have enough experience. Others see only the most serious faults without considering that ethics is a daily practice.

Interim reports have been published online on the particular issue of 'university integrity officers' in France and on the issue of doctoral school directors based on the first thirty completed questionnaires.¹⁴

¹⁴ M. Bergadaà, 'Analyse préliminaire "Établissements et Intégrité académique"', *Responsable*, 30 March 2020; M. Bergadaà, 'Analyse

Because this is a qualitative analysis, the in-depth examination of thirty detailed responses is sufficient to perform a floating analysis, but not of course to propose a structuring of the field or a social representation of the concept of integrity in institutions, and certainly not a profile by geographical areas.

We therefore completed this initial floating analysis with a semiotic analysis of the responses of thirty heads of doctoral schools, ten members of university rectorates or presidents' offices, and eight administrators in charge of ethics and integrity issues. We also asked twenty-five people with whom we had conducted mediations over the past ten years to react to the themes dealt with during the International Colloquium on Research and Action on Academic Integrity (30-31 October 2020). To enhance the linguistic work on the concept of trust through the dimensions of proximity, we implemented the methodology proposed by Guilhaumou, Charaudeau, and Kerbrat-Orecchioni.¹⁵

The diagram below illustrates the five main axes of proximity—or dimensions of trust—that we have derived from our analyses. These axes are defined by the explicit 'observables' that were provided to us in response to our questions or spontaneously, as these were always open questions. These observables are the warp and weft of our presentation below. It should be noted that, in qualitative data analysis, we speak of 'data saturation' when we find nothing new in the answers and there is no point in conducting further interviews. After creating Figure 1, we

préliminaire "Etudes doctorales et Intégrité académique", *Responsable*, 30 March 2020.

¹⁵ J. Guilhaumou, 'Le corpus en analyse de discours: Perspective historique', *Corpus*, 1 (2002), Article 1; P. Charaudeau, *Langage et discours: Éléments de sémiolinguistique (théorie et pratique)* (Paris: Hachette Classique, 1983); P. Charaudeau, 'Comment le langage se noue à l'action dans un modèle socio-communicationnel du discours. De l'action au pouvoir', *Cahiers de linguistique française*, 26 (2004), 151-75; C. Kerbrat-Orecchioni, *L'énonciation de la subjectivité dans le langage* (Paris: Armand Colin, 1980).

looked up the definitions of *trust* and *confidence*. Simply put, *trust* is a subjective assessment based on interpersonal relationships, which is binding on the partner(s), but which cannot be demanded; we recognize here the two dimensions of identity proximity and network proximity in Figure 1. On the other hand, *confidence* is more factual and objective, emerging from institutional arrangements; in this case, we recognize the two dimensions of process proximity and technological proximity in Figure 1.

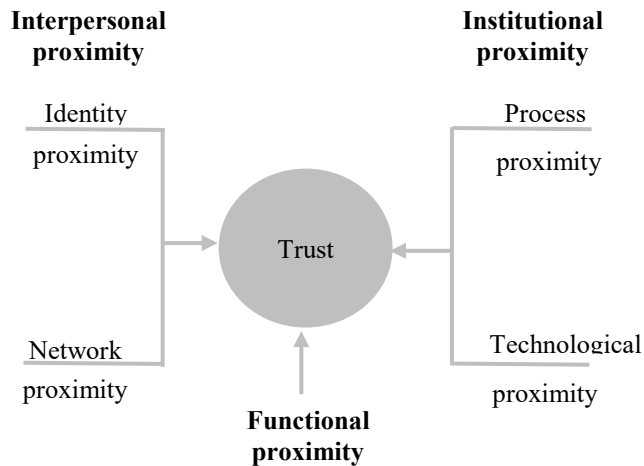


Figure 1: The proximity dimensions of the concept of trust

3. How does interpersonal proximity create trust?

Interpersonal trust is defined as an orientation toward people in general, based on previous experiences, considering that a person or group can be relied upon.¹⁶ This creates operational and social interdependence, which develops a sense of community among the partners. This closeness that the AIAs talk about has two dimensions.

¹⁶ Rotter, 'Generalized Expectancies'.

3.1 Identity proximity

This identity proximity is ideally considered to be the cement of a community based on the service of knowledge. Victims and witnesses who turn to IRAFPA to request mediation say they are insecure because of the excessive dispersal of cognitive (who is their officer?) and administrative responsibilities in their academic environment (is there an ombudsman? an ethics officer?). They are also disturbed by the distance, in both time and space, between their need for support and the entity that should receive their cry for help. Thus, many of them state that they do not feel close to their institution's ethics officer, even though he is supposed to take care of them, or even distrust the officer, considering that she is primarily at the service of the university president, who in fact appointed her.

It might reassure them to know that our survey results show that many integrity officers are also going through an existential crisis. Many are struck by the fact that our profession seems to have lost its prestige. They tell us that they see the growing importance of conflicts between authors, who call for a mediator on a daily basis. Some fear that this public image will deteriorate further. They are also solicited during conflicts between thesis directors and doctoral students. In the absence of the necessary mechanisms, they do not have a basis for their work and their role is usually limited to finding diplomatic ground for consensus. Many of them also regret not finding a space to discuss these issues with their peers. They feel isolated.

A second observable reported by respondents is the feeling of no longer belonging to a 'shared destiny community' driven by the goal of advancing knowledge.¹⁷ Most respondents who raise this point believe that researchers are not sufficiently aware of ethical issues. These 'watchdogs' (in Bramstedt's sense) thus found it difficult to discuss

¹⁷ M. Bergadaà, *Academic Plagiarism. Understanding It to Take Responsible Action* (Geneva: Globethics.net, 2021), chapter 4.

integrity calmly. The respondents become defensive and the mediation process seems to be a slippery slope. In this context, the mediator is not able to fulfill his essential role as an agent promoting trust between the parties and becomes discouraged.

Another observable of this identity proximity is the growing doubt about the factual inequality between those who fulfill their duty as public servants by serving their institution and the community and those who have a profile as pure researchers. Integrity officers complain that they have more and more responsibilities, while their colleagues who publish only to promote their career are more pampered by their authorities. Some also find it painful to see that many false concepts are disseminated in publications and no one seems to be bothered by this. They put this down to growing individualism and the compulsion to follow mainstream thinking under the diktat of *publish or perish*.

Finally, a fourth observable makes this kind of proximity more difficult to feel: AIAs are caught between recourse powers. Their sense of diminished importance increases as compliance mechanisms gain ground in educational and research institutions. As a result, they are sometimes listened to only after the institutions' legal advisers or the parties' lawyers. A second constraint is that media coverage of cases can undermine mediation arrangements if leaks occur during investigation procedures. Finally, in some countries, legal constraints, such as the statute of limitations or copyright, prevent AIAs from acting.

How can identity proximity be restored and reinforced?

In order to avoid this compartmentalization and allow everyone to exchange ideas and break their isolation, IRAFPA offers colloquia and debates, for example related to this book. For it is not enough for everyone to know that there are experts they can call upon; they also need to understand these experts' reference corpus. For example, a deontologist who relies only on her own convictions about the ethics of belief might not refer to formal rules and standards (if they exist in her

institution). She would miss the arguments of another AIA, who referred to an ethic of responsibility and who based his argument and discourse on managing the consequences of criminal acts.¹⁸ It is through respectful, profound debate that interpersonal proximity is renewed and AIAs' empathic qualities are enhanced.

3.2 Network proximity

We live in a world of networks. Our writings and publications are disseminated within networks based on specific research classified by discipline and by level of difficulty and audience (A Journals, B Journals, conferences, workshops, etc.). Within these networks, the search for the added value of our work is now reflected in citation indexes and funds allocated according to productivity. These networks are essential, and it is therefore not surprising that AIAs feel closer to the members of their networks than to their direct colleagues. This is especially true since the role leads to solitariness due to the confidentiality required for complaints, mediation, and investigation files.

We observe that the structure of these networks can crystallize situations. Some AIAs denounce the recruitment of researchers based on affinity and not on real skills. As a result, they may find themselves caught between clan struggles that they are asked to arbitrate. Their position is all the more uncomfortable as they are well aware of the principle of the staircase: anyone who rises above the others, in the position of ombudsperson, AIA, or head of the doctoral school, will one day have to go back down the stairs and inevitably come across the same people they seen in an awkward position. Logically, some AIAs therefore seek detours to avoid returning to their functions as professors and researchers by the same staircase. They may also choose not to

¹⁸ M. Bergadaà, *Le Temps: Entre Science et Création* (Caen: Editions EMS—Management & Société, 2020).

return to their former positions and to move from place to place as AIAs.

We observed how common it was for integrity officers, who might be former directors of doctoral schools, to become university vice-presidents or vice-rectors. In this way, network proximity is transformed into bureaucratization conducive, which is to a certain caste-based *omertà*. This leads to an accumulation of functions: people occupy key positions in a logic of power and block the free circulation of information and democratic debate. The risk is no longer just bureaucratization but the crystallization of something that should remain fluid and dynamic: our academic networks. Thus, by analyzing the answers provided by integrity officers in France, all of whom were members of a formal OFIS (office for research integrity) network, we find... that of them simply wait for top-down directives that take forever; meanwhile, they just do their best.¹⁹

How can network proximity be restored and reinforced?

To counter the discouragement that many AIAs feel as they struggle against both bureaucratization and the crystallization of their supposed networks, IRAFPA has created a WebTV channel that offers AIAs, and everyone else, thematic video shorts, debate programs, online case studies, etc. We also periodically send them the IRAFPA newsletter to enable them to participate in a network that tries to de-dramatize situations by talking very concretely about what they experience every day.

4. How does institutional proximity create trust?

In a situation of uncertainty, individuals hand over part of their decision to commit to an external entity since part of the action is

¹⁹ <https://www.hceres.fr/fr/ofis>.

beyond their control and knowledge.²⁰ Institutional trust is attached to a formal structure that guarantees the effective commitment of stakeholders. In this research, it is based on two well-known dimensions of proximity.

4.1 Process proximity

This kind of proximity refers to not only the tools established in different countries and institutions, but also AIAs' familiarity with them. For example, the University of Montenegro, which set up a comprehensive system with the support of IRAFPA, had to wait for a national law to be enacted before it could define its own scope of action. Sometimes our respondents were aware of the existence of standards and regulations but did not know how or where to find them in the specific cases where they had to intervene.

A first and very noteworthy observation is that, in the English-speaking countries, but also in Quebec and Switzerland, AIAs spontaneously turn first to regulation and compliance mechanisms. It is therefore surprising that formal action is so recent. For example, the French government commissioned the Corvol Report to develop a national guideline, and the Canadian government asked its three national research agencies to develop guidelines outlining 'responsibilities and related policies that apply to researchers, institutions and organizations'.²¹ However, while these guidelines are now becoming widely known, this does not mean that AIAs are blindly relying on them. When we ask them to express what they consist of, there is great

²⁰ Karpik, 'Dispositifs de confiance'.

²¹ P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d'État chargé de l'Enseignement supérieur et de la Recherche*, 29 June 2016; Secretariat on Responsible Conduct of Research (Canada) and others, *Tri-Agency Framework, Responsible Conduct of Research* (Ottawa: Secretariat on Responsible Conduct of Research, 2016).

variance between institutions within the same countries. It seems that each institution sets its own rules and regulations, which are usually intended for students and not for researchers. There are almost as many definitions of ‘duty of confidentiality’, ‘duty of public service’, and ‘academic freedom’ as there are institutions in a given country.

Another observable is the absence or variability of arrangements within the institutions themselves. AIAs do not know how to proceed in defining an investigation committee, for example. For more than fifteen years, IRAFPA has been calling for independent committees in major cases of fraud or plagiarism to avoid conflicts of interest. However, only two of our respondents defined this dimension as deserving attention. Furthermore, some countries are hamstrung by legislation that requires, for example, university presidents to lodge complaints themselves in order to trigger an internal investigation. One can imagine how long the process can take. As for annual reports on fraud and plagiarism, which would make it possible to anticipate and to implement preventive procedures, they are simply nonexistent. Yet we had asked the question for a reason. But even when these assessments exist, only apply to students. In Canada, deans can deal with integrity violations as long as the information is passed on to them. But there is no simple mechanism to protect whistleblowers, nor is there a mechanism for review.

A third observable that bothered our respondents was access to the right experts. In Canada, it seems clear whom cases should be transferred to, depending on the nature of the problem. For example, depending on the case, one should mobilize the head of the Copyright Office or the Office for Responsible Conduct in Research. Other respondents speak not of experts but of influencers. However, the qualification of expertise is problematic if it leads to the role of AIA being entrusted to administrators and not to researchers. For example, a legal adviser does not have the same understanding of the problems as researchers. If we hear ‘plagiarism’, we spontaneously think of ‘work of

the mind’ and therefore ‘infringement of the inalienable personality’, whereas a lawyer will reply with ‘prescriptive copyright’.

How can process proximity be restored and reinforced?

Regarding process proximity, two articles in this book present the actions of IRAFPA. Ensuring scientific integrity implies the institutionalization of integrity practices by sharing a reference framework with all players. This involves considering the different levels of action to which institutions must respond in the face of possible breaches: guiding principles, involvement of managers, communication, monitoring and control, training, and handling complaints and sanctions.

4.2 Technological proximity

We have gathered little useful information on this dimension. The first observable is the cry of most AIAs for anti-plagiarism software! Except that it is not always accessible and it is far from being a miracle solution. For proof of this, one only has to read the analysis by Eck.²² A second observable is that it seems strange to be thanked by many colleagues in our survey for the information we provide on the IRAFPA website or its LinkedIn page.²³ The creation of information portals would seem to us to be the responsibility of their institutions. However, the few respondents who indicated that they make use of information platforms seem dubious about them, as they do not seem to be user-oriented. Worse, when they do exist, they are sometimes used to ask AIAs to fill in forms describing their work or the cases they are dealing with, which they find to be a waste of time.

²² N. Eck, ‘Utiliser des logiciels de détection de plagiat: L’envers du décor?’, in *L’urgence de l’intégrité académique*, ed. by M. Bergadaà and P. Peixoto (Caen: Editions EMS, 2021), pp. 321-37.

²³ <https://irafpa.org>.

How can technological proximity be restored and reinforced?

It seems essential to create a specific type of integrity-based modeling covering internet tools. The aim is not to make the integrity website a reflection of the current organization, but rather to create a new type of organization integrating scientific culture and technological proximity. It is a question of analyzing how the use of computers has obliterated methodological debates among researchers and created an illusion of objectivity. Between the black boxes of commercial software and generalist tools unsuited to scientific practices, researchers struggle every day in an increasingly labile digital ecosystem with uncertain governance. On the other hand, the creation of advisory and communication platforms involving multiple players does not seem so difficult when necessity dictates. These platforms, which are flourishing on the web, could serve as information portals but also as places for debate. They could be enriched by contributions from all sides. This does not yet exist at the institutional level.

5. How does functional proximity create trust?

What are the levers of the AIAs' function that would allow them to act quickly when faced with a case of integrity violation? The question may seem pernicious insofar as we observe that a large part of their job description remains to be clarified. Take the example of the integrity referents in France, who for some years were not supposed to deal with individual cases or mediate. Their role seemed to be designed only to implement general regulations and institutional arrangements. In view of the increasing number of complaints, IRAFPA is now working with several of these AIAs to help them deal with problematic cases.

The first observable of functional proximity is the specific skills for which the AIAs are chosen, elected, or appointed. Other than saying that many of them are retired professors, it seems that no distinctive skills are being sought. Thus, French integrity referents are appointed by the

university presidents to whom they report administratively and hierarchically. Sometimes ‘watchdogs’ have volunteered because they have been powerless witnesses to fraud or have been involved in a commission of inquiry and wish to make their thoughts available to the community. But it all seems to be very subjective and the vast majority of our respondents were unable to say what their profile was.

The second observable is clearly the almost universal lack of training for AIAs. While they may have attended a seminar on integrity in general (e.g. those offered by the CNRS in France), they did not seem to have received any specific training in handling misconduct cases. Most of them proceeded by basic analogy with the few cases where they had been personally involved. The simple techniques of mediation or of building a case seem unknown to the vast majority of AIAs. And if they talk about the need for training (i.e. in ethics), it is to target young lecturers or PhD students, never themselves. None of them distinguished between the concepts of morality, deontology, ethics, and responsibility, which are rooted in very different epistemological and pragmatic realities. None of them alluded to the differences between copyright and slander and defamation.... They had simply not acquired the specialized vocabulary of the position they held.

A third observable is associated with a certain annoyance on their part: the fact that they have little information at their disposal deprives them of any chance to engage in a performative act by speaking out.²⁴ Thus, some complain that they do not inspire enough confidence to be able to act. For example, many heads of doctoral schools only become involved in conflict situations once they have degenerated. Since at that point they can no longer act as mediators, all they can do is change a student’s thesis supervisor. Another example is that it is often only when a thesis is about to be defended in front of a “packed jury” that they are informed of its failings and then it is too late. In order to be able to play

²⁴ J. L. Austin, *How to Do Things with Words* (Oxford: Clarendon Press, 1962).

a fully responsible role, they would like to be informed in real time of problematic situations that arise in institutions or entities. Even more problematic is the fact that they often only learn about the most serious integrity violations when these are revealed by the media. This makes them question the attributes of their function.

How can functional proximity be restored and reinforced?

It is up to AIAs' institutions to define the scope of their intervention and their terms of reference. It should be remembered that, symbolically (in Peirce's sense), not being informed of major cases means not being someone who deserves consideration in a hierarchical academic order. Putting integrity back where it belongs—at the heart of the academic system—would therefore call for an unambiguous definition of the function of AIAs. Moreover, when they are involved in mediation with IRAFPA, institutional watchdogs recognize the rigor of our methods and procedures for establishing files. They need only attend our seminars to acquire these skills.

We are aware that they need to be trained as quickly as possible and as slowly as necessary in the tools we have developed and refined over the course of more than 300 mediation interventions at IRAFPA. This is why summer schools are offered with a clearly defined program to fill these gaps.

6. Discussion

The studies we conducted during the year 2020 allowed us to propose the operational dimensions of the concept of trust as experienced by the AIAs who participated in our work. Institutional frameworks vary considerably from one country to another and from one academic tradition to another. Not only are legislation and regulation sometimes unclear to our respondents but the importance attached to them may be as well. The dimensions of trust thus translate

into proximities with variable geometry that do not only or necessarily imply cultural or purely geographical proximity. If institutional proximity facilitates collective learning, institutional distance is no less intriguing in the space of reflection that we wish to nurture. As a *final interpretant* (in Peirce's sense), our aim is to propose a generic model to foster the self-confidence of AIAs.

IRAFPA has a role to play in the development of interpersonal proximity among AIAs, whether in its identity or its network dimension. Identifying and bringing together agents who belong to the same space of academic integrity also involves fostering 'temporary geographical proximity' in order to build organizational and institutional proximity.²⁵ The colloquium we organized in 2020 in Coimbra, as well as the Summer Schools organized in 2021, encourage us to follow this path. Sharing knowledge builds mutual trust and self-confidence, as well as a sense of community of action in defense of academic integrity. Beyond the differences between countries with different cultures and traditions, and even between scientific fields, it is possible and desirable to promote a cognitive proximity that allows for the development of shared modes of perception and action among stakeholders in the field of the ethics of research and teaching.

But the institutional worlds observed in our studies communicate only superficially, and may not even understand each other. Who could be surprised that there is no single standard definition of plagiarism, for example, but a multitude? It is time to engage in the democratic exercise of debating the arrangements that exist in different institutions, and to discuss their strengths and weaknesses transparently and honestly. Why do AIAs have to talk to us only bilaterally (and confidentially)? In fact, the democratic construction of integrity should be based on debates

²⁵ C. Werker and W. Ooms, 'Substituting Face-to-Face Contacts in Academics' Collaborations: Modern Communication Tools, Proximity, and Brokerage', *Studies in Higher Education*, 45(7) (2020), 1431-47.

involving all AIAs but also all knowledge stakeholders: researchers, supervisors, administrators, and students. There would then be a reconciliation between the *raison d'être* of the profession and its shared values. Peković, Janinović and Vučković explain very well how a holistic approach is possible in an institution where the rector and the heads of faculties were highly motivated to work with some basic coaching from IRAFPA. Process proximity, as well as technological proximity, was strengthened, day after day.

However, there is one point on which IRAFPA cannot replace the real leaders of academic integrity, namely the presidents and rectors of our universities. It is a question of defining a function, with a set of specifications and working resources. It is also a question of giving freedom to act, and freedom also means full transparency of what happens in an institution. The frequent resignations that occur do not seem to be the fault of individuals, but of the lack of consideration for them. It is to them that this article is addressed, because we believe that IRAFPA's role is to help them strengthen the five dimensions of trust that we have proposed. The closer they come to them, the better they will know how to use them. It is the flexibility to mobilize one or another, or several simultaneously, that will strengthen their confidence in their power to act.

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ACADEMIC INTEGRITY IN SPANISH HIGHER EDUCATION: THREE PARALLEL WORLDS

Cinta Gallent Torres and Isabel Tello Fons

Abstract

Despite the measures implemented by Spanish universities to combat malpractice and raise awareness among students and researchers, the reality may seem discouraging, as (i) students continue to plagiarise freely encouraged by an increasing volume of digital resources at their disposal; (ii) researchers face an extremely competitive and demanding university system with its own rules; and (iii) universities fail to tackle this socially rooted phenomenon. Although studies on academic integrity have a long tradition at the international level, this is not the case in Spain. However, since the 1990s, researchers have been working on this issue. However, they take undergraduate studies rather than postgraduate studies as their field of observation. And above all, they do not consider the world of research. Thus, when it comes to combating academic dishonesty, there is a growing gap between members of the academic community (students, researchers and institutions), which shows the lack of consensus on the issue. This article aims to describe how academic dishonesty is viewed in three worlds that coexist, but are independent of each other: students, researchers and institutions.*

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1. Introduction

The interest in the topic of academic dishonesty in higher education in Spain started in the 1990s, when studies began to address the issue of validity of college degrees.²⁶ Although more descriptive than analytical, these pioneers openly broached an issue that had hitherto remained unexplored in order to avoid discrediting the image and reputation of university institutions. The lack of integrity within academic settings had become a social phenomenon that should be analyzed from different angles, so empirical data was compiled. Rigorous research was begun, involving the analysis of students' reprehensible behavior and its underlying factors, prevalence, and severity, along with measures in place to counteract it.²⁷ During this period, the speed at which the students learned to act in this unethical manner in their degree courses contrasted with the inability of the universities to put in place measures designed to mitigate such behavior. In other words, it is difficult to understand the current 'passivity' shown by members of the faculty in this regard, particularly given the rampant rate at which this kind of fraud is developing in Spain.²⁸

Research and Action, Geneva: Globethics Publications, 2023, pp.59-78, DOI: 10.58863/20.500.12424/4271542 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

²⁶ J. M. Moreno Olmedilla, 'Con trampa y con cartón: El fraude en la educación, o cómo la corrupción también se aprende', *Cuadernos de Pedagogía*, 283 (1999), 71-77.

²⁷ J. Vaamonde and A. Omar, 'La deshonestidad académica como un constructo multidimensional', *Revista Latinoamericana de Estudios Educativos*, 38 (2008), 7-27; R. Comas Forgas and J. Sureda Negre, 'Academic Plagiarism: Explanatory Factors from Students' Perspective', *Journal of Academic Ethics*, 8(3) (2010), 217-32.

²⁸ E.-M. Espiñeira-Bellón, and others, 'Cuestionario para la detección del plagio académico en estudiantes de doctorado (CUDECO-DOU)', *Revista de estudios e investigación en psicología y educación*, 6(2) (2019), 156-66.

A growing interest in the problem is also reflected in the significant increase in scientific publications aiming to shed light on the management of academic integrity by university institutions.²⁹

This article aims to describe how academic dishonesty is regarded within Spanish universities by the three main groups of players (students, researchers, and institutions) jointly involved in the knowledge creation process through research and teaching. By examining how each player deals with academic dishonesty, readers will grasp the current lack of coordination in addressing the problem and the extent to which Spain is dragging its feet in putting measures in place to prevent this behavior from becoming widespread.

2. The Spanish students' perspective

One the reasons suggested to understand why Spanish students resort to fraud and plagiarism is the problems they face with academic writing.³⁰ Students appear to find it difficult to use their own words in their papers, to quote and reformulate the ideas of other authors, or to use an authorized bibliographical reference style in their academic work.

²⁹ C. Gallent Torres and I. Tello Fons, “‘Le cyberplagiat’ dans le cadre de l’éducation supérieure espagnole: Explorer les causes pour atteindre des solutions concrètes”, *Synergies Espagne*, 11 (2018), 195-212; N. Olivia-Dumitrina, M. Casanovas, and Y. Capdevila, ‘Academic Writing and the Internet: Cyber-Plagiarism amongst University Students’, *Journal of New Approaches in Educational Research*, 8(2) (2019), 112-25; V. Cebrián Robles, M. Raposo, and S. Campos, ‘Study of the Reasons for and Measures to Avoid Plagiarism in Young Students of Education’, *Profesorado, Revista de Curriculum y Formación del Profesorado*, 24 (2020), 50-74.

³⁰ M. T. Valverde González, ‘Escritura académica con tecnologías de la información y la comunicación en educación superior’, *Revista de Educación a Distancia (RED)*, 58 (2018), Article 58; M. M. Boillos Pereira, ‘Las caras del plagio inconsciente en la escritura académica’, *Educación XXI*, 23(2) (2020), Article 2.

They therefore succumb to dishonest practices that are perhaps unintended, but more often than not are blatantly deliberate.³¹ This handicap stems from learning practices prior to college.³² The development of Information and Communication Technologies (ICT) and the unlimited access to multiple digital sources have transformed the way in which they articulate new data without having yet learned to express critical thinking.

New technologies have become the perfect allies to ‘help’ students with their assignments and the most direct way to make a mistake, because nowadays, students’ behavior is influenced by socially accepted attitudes that taint their ethics (e.g. the indiscriminating reproduction of the ideas of others, the recycling of already published articles, custom-made essays, and identity fraud). An example of this is a typical online platform in Spain: *El Rincón del Vago*. Since the late 1990s, it has enabled anonymous users to upload their work so that others can use it as support for their coursework or submit it as their own efforts.³³ Many sites thus present themselves as offering support to the students, when in reality they are accomplices in this dishonesty. And far from being met with outrage, this practice is generally accepted in Spain.

There are many free software and private online platforms (supported by user communities). Tools such as *Smodin.me* and *Spinbot* paraphrase texts from the Internet or from other users, so that students are able to submit the papers as their own. *Resoomer* and *LinguaKit* summarize texts with the help of a technology that detects the main

³¹ Espiñeira-Bellón and others.

³² K. S. López Gil and M. C. Fernández López, ‘Representaciones sociales de estudiantes universitarios sobre el plagio en la escritura académica’, *Íkala, Revista de Lenguaje y Cultura*, 24(1) (2019), 119-34.

³³ D. Díaz Arce, ‘Evaluación del desempeño de tres herramientas antiplagio gratuitas en la detección de diferentes formas de copy-paste procedentes de internet’, *EduTec. Revista Electrónica de Tecnología Educativa*, 59 (2017), Article a354.

ideas of a text almost instantaneously. This enables students to identify the principal concepts in a text within ten minutes. Users are also able to apply different levels of paraphrasing, according to the number of terms that are modified. Consequently, provided the tool is used ‘intelligently’ and the student reviews and corrects the resulting version, the teacher will find it hard to determine whether the student has used the application.

The business is thriving, and students with minimal economic means can benefit from a sophisticated service. There are digital platforms that can produce papers on demand, and some of them can provide an acceptable standard of work for a reasonable price (e.g. *Hazmitrabajo.es*, *Hacertfg.com*, *Apruebatodo.com*, *trabajosfindegrado.es*, and *Apruebaya.es*).³⁴

They all promise their clients fast, personalized service with an assurance of confidentiality. They guarantee that students will obtain excellent marks, with the level of plagiarism kept to a minimum in case the university uses an application for verification. On the other hand, students are able to refer any questions relating to their work to a fraudulent consultant (referred to as a ‘university expert’) who is ready to provide personalized attention. These businesses provide easy payment terms and discounts and special offers to their clients (e.g. ‘-30% + free PowerPoint on Black Friday’). Certain platforms charge their fees per project or by page/slide, according to the type of work required (prices range between 7 and 9 euros per page, and 3 euros per slide). The most remarkable aspect of such services is the delivery speed: one week for a graduation project, ten days for a master’s degree project, and ten weeks for a doctoral thesis. The business models of such enterprises are fairly similar: they all benefit from the stress suffered by overworked students, who suffer from a considerable overload of academic work. Sooner or later, all students will likely be tempted to use

³⁴ Comas Forgas and Sureda Negre.

such services, particularly when they have the assurance that they will not get caught. Dishonest behavior by students is not only on the rise but has become increasingly sophisticated and much harder to detect.³⁵

The onset of the COVID-19 pandemic and the sudden increase in online teaching have led to considerable growth in the temptation to plagiarize. Traditional teaching has had to adapt fast and many teaching establishments were caught off guard.³⁶ And, in addition to universities, pre-university studies are also being affected. In science, for example, tools such as *PhotoMath* or *FreeFormulas* help solve mathematical problems without requiring the student to understand them. Although the application appears to be an educational aid, it allows the user to obtain a result by simply sending a photograph of the problem to be solved. The pupil receives the stages involved in solving the problem, but the solution is provided instantaneously; thus, it is a temptation that few pupils are able to resist. Another platform that has become much more popular during the pandemic is *Recursos1clic*, where you can find solutions to the most common questions appearing in textbooks, ‘quality’ study materials, and completed exams. Although it focuses on secondary education, the website indicates that it has ‘begun to upload university material’.

The absence of any legislation whatsoever to restrict or penalize this behavior has resulted in the general idea that ‘anything goes’, that everything is easily accessible and downloadable, and that it is all public and can be used for personal gain. The fast development of new technologies and the lack of integrity at the cultural level call for an urgent review and update of legal regulations, in order to address the full

³⁵ V. Cebrián Robles, and others, ‘Percepción sobre el plagio académico de estudiantes universitarios españoles’, *Educación XXI*, 21(2) (2018), Article 2.

³⁶ A. J. Baladrón Pazos, B. Correyero Ruiz, and B. Manchado Pérez, ‘Digital Transformation of University Teaching in Communication During the COVID-19 Emergency in Spain: An Approach from Students’ Perspective’, *Revista Latina de Comunicacion Social*, 78 (2020), 265-87.

range of new realities.³⁷ Students are fully aware of the legal loopholes and minimal fines imposed on those who are caught red-handed. And they continue their dishonest practices at the university level.³⁸

These practices have become widespread, and it is common to find videos of young people (on widely viewed platforms such as TikTok and YouTube) explaining the advantages of using such methods to cheat. A feeling of impunity and complacency has become prevalent throughout Spain.³⁹

3. The researchers' perspective

The irresponsible attitude of students with regard to their education, combined with institutional silence and the current political passivity concerning academic fraud, poses a cultural problem for which there is no quick solution, at least in the short term. The issue is then to determine whether the second group of academic players, the researchers, might act as models of integrity, perhaps even as a mouthpiece.

In reality, researchers are subject to the same temptations as students for the same reasons of work overload, actual or perceived. The motive force of researchers is the production of papers for publication and the compulsion to ensure visibility for their professional experiences. The stress of having to compete for financial resources for specific projects can lure them into inappropriate behaviors. The competitiveness of the current job market and the obsession with having a brilliant career, measured in terms of volume of publications, can lead them to engage in dishonest practices. Unlike academics in the last century, who would

³⁷ J. Sureda Negre, J. Reyes Vives, and R. Comas Forgas, 'Reglamentación contra el fraude académico en las universidades españolas', *Revista de la Educación Superior*, 45(178) (2016), 31-44.

³⁸ Cebrián Robles and others, 'Study of the Reasons'.

³⁹ Espiñeira-Bellón and others.

allow their projects to mature over time, researchers nowadays are willing to pay high registration fees to attend conferences or to have their articles published in scientific journals. A new publishing market that threatens in-depth research work has emerged in recent years, driven by English-language publishers. Numerous fraudulent journals have therefore been launched that provide no guarantee whatsoever of a serious article review process.⁴⁰

Just as students are aware of their lack of ethics, researchers opting for this service know perfectly well that they are behaving unethically. However, they would allege that the fault lies with the Spanish university system, which is characterized by a closed, inbred structure. The pursuit of a career in academia, which involves becoming a civil servant, is a long and bumpy road. For instance, to obtain a certification from ANECA (the public body responsible for assessing the achievements of teachers and researchers), applicants must persuade it to allow them to enter a public university. They need to present a solid university record, broad experience in teaching and excellent results as researchers. Obtaining this certification—the level of which increases every year—drives researchers to this kind of practice, since the pressure is enormous: the idea is to publish in first-rate scientific journals in the shortest possible time. The passion for research is less important at this point than the tangible product, which might essentially be a mere mosaic of other sources.⁴¹ In light of these conditions, instead of choosing their publications on the basis of their intellectual appeal, researchers opt for the most publishable topics in order to secure a position and the associated remuneration.

⁴⁰ J. Segarra Saavedra, M. Túniz López, and A.-G. Custódio Frazão-Nogueira, ‘Impacto en el área de comunicación de *call for papers* de presuntas revistas fraudulentas’, *Revista Prisma Social*, 31 (2020), 264-82.

⁴¹ A. Vargas Franco, ‘Apropiación y plagio académico: Un estudio de caso sobre una alumna debutante en la escritura en la educación superior’, *Íkala, Revista de lenguaje y cultura*, 24(1) (2019), 155-79.

Do researchers want to escape this vicious circle? This situation usually exasperates young researchers, who accept it as a necessary evil, which they cannot get away from. Publishing houses benefit from this situation, resulting in impressive growth in the number of scientific journals and online events now available to the university community. There are numerous examples of this trend. In this transactional landscape, the more indolent researchers, those with laxer moral compasses, and those needing immediate results might be inclined to take a shortcut by resorting to academic fraud.⁴²

Academic institutions are aware of this rapidly expanding business. However, it would not be fair to state that the researchers who find themselves in the situation described above are the only ones to be affected by this phenomenon. Experienced researchers can be equally prone to a lack of integrity. In their case, the lengthy and competitive career in a university setting obliges professors to be highly productive if they wish to enjoy better working conditions. Researchers are more aware than ever of technology and applications, online platforms and tools enabling them to contact other researchers, and this facilitates fraud. The main difference between students and researchers is that the latter are fully aware of their offence. They cannot justify their behavior, they understand that they are being dishonest, and they are aware of the consequences of their actions.⁴³ Such dishonest researchers disseminate false information, and lie to their readers and their institutions. By repeating these dishonest practices, they are stealing academic positions from other more deserving individuals.

⁴² Segarra-Saavedra and others.

⁴³ A. Fernández Ramos, 'Estrategias y herramientas tecnológicas para evitar el plagio académico', in *La infodiversidad y el uso ético del conocimiento individual y colectivo*, ed. by E. Morales Campos (Mexico City: Library and Information Research Institute, National Autonomous University of Mexico, 2017), pp. 253-75.

Who are they? Criminals in disguise? No, some are full-time researchers, faculty members, individuals working in public or private institutions. They are well-educated and are probably critical of plagiarism, but in a world of fake news, of easy access and weakness, they lack the moral strength to perform their jobs properly. They simply disregard the high standards that are inherent in their roles as researchers.

And yet, most researchers are also teachers, and if they are unable to conform to the highest standards of academic integrity, they cannot demand that their students act otherwise. This situation is unlikely to change rapidly unless the third player, the Spanish university system, chooses to place academic integrity at the core of its mission.

4. The universities' perspective

The examination of the strategies implemented by Spanish institutions to combat academic fraud helps to understand why Spain is lagging behind other countries such as Finland, Switzerland, Germany, France, and the United States. Academic integrity and the new forms of fraud that are appearing on the scene should be a serious issue of concern for universities and government educational bodies. Although the number of measures being implemented by Spanish institutions to combat reprehensible behaviors is on the rise, few positive results have been detected; this means that, to date, the efforts made by the universities have been very limited and focused on raising students' awareness.⁴⁴

Most Spanish universities are beginning to implement policies, guidelines, and institutional protocols in this area, but feedback on their

⁴⁴ P. Alfaro Torres and T. De Juan Juárez, 'El plagio académico: Formar en competencias y nuevas prácticas', *RUIDERAe: Revista de Unidades de Información*, 6 (2014), Article 6.

efficacy has yet to be gathered. They all suffer from significant limitations and legal loopholes that leave the door wide open for fraudsters.⁴⁵ Thus, most focus on academic plagiarism, penalizing the copying of ideas, opinions, and texts belonging to third parties without their authorization, but fail to penalize the sale of work on websites, data forgery, or identity theft. Certain universities require their students to sign codes of ethics at the start of the academic year and they are warned of what will happen if they break the ‘agreement’.⁴⁶ However, in reality, nothing happens because students are rarely reported, proving that this measure is ineffective in dealing with the situation. Other Spanish universities have appointed a group of professors to be ‘integrity mentors’ or have created academic integrity committees to act as arbitrators for the institution. In theory, they are responsible for resolving any conflicts that may arise when dishonest behavior is detected, although, in practice, neither the teachers nor the students are aware of their existence. Universities do not generally tend to make such mechanisms or services public; consequently, nobody makes use of them except in the event of major conflict between individuals.

A range of sanctions should also be used as deterrents when dealing with this problem.⁴⁷ But this is not actually the case. Students who are caught red-handed and found guilty of dishonest academic behavior are usually asked to redo the work that was copied, fail the subject, or have their final grade marked down by a certain percentage, but more serious measures such as commencing disciplinary proceedings or expulsion

⁴⁵ Sureda-Negre and others, ‘Reglamentación contra el fraude académico’.

⁴⁶ V. Cebrián Robles, M. Raposo Rivas, and J. A. Sarmiento Campos, ‘¿Ética o prácticas deshonestas? El plagio en las titulaciones de educación’, *Revista de educación*, 374 (2016), 161-86.

⁴⁷ A. Cueva Lobelle and L. Ochoa Sierra, ‘Representaciones sociales de profesores y estudiantes acerca de plagio: Estudio comparativo’, *Revista de Investigaciones · UCM*, 15(25) (2015), 60-69.

from the university are seldom applied.⁴⁸ As for researchers caught perpetrating fraud, they do not really risk anything at all. And, since the sanctions are not made public, they are not credible. It is clear that current measures are insufficient and that both students and researchers appear to believe that the benefits of academic fraud far outweigh any potential sanctions.

Are Spanish universities able to transfer their responsibility to the teaching staff? In order for the teaching community to model exemplary behavior, much needs to be done to provide optimal conditions in terms of workload and available resources. Unfortunately, except in a few cases, teachers have a volume of classes and students that considerably exceeds an acceptable level for quality teaching.⁴⁹ Teachers check work superficially and do not spend time innovating teaching methods to motivate the students. If their institutions should entrust them with the additional task of monitoring students' ethics and verifying that their coursework and exams are free from plagiarism, it is highly unlikely this will produce serious results. Some will choose not to penalize any fraud they detect in order to avoid problems with the students. Others are simply not concerned with the value of degrees from the institution they work for, and even less with their colleagues' unethical conduct. Why should they concern themselves with fraud and plagiarism amid such a culture of impunity? The issue becomes even more crucial when professors supervise doctoral students, who will ensure academic succession and who will become the guardians of academic ethics themselves in a few years.

⁴⁸ C. Gallent Torres and I. Tello Fons, 'Percepción del alumnado de traducción de la Universidad Internacional de Valencia (VIU) sobre el ciberplagio académico', *Revista Digital de Investigación en Docencia Universitaria*, 11(2) (2017), 90-117.

⁴⁹ P. Mahabeer and T. Pirtheepal, 'Assessment, Plagiarism and Its Effect on Academic Integrity: Experiences of Academics at a University in South Africa', *South African Journal of Science*, 115(11-12) (2019), 1-8.

Academic fraud, therefore, far from being an individual and isolated phenomenon, has become a social one.⁵⁰ The consequences of failing to address this issue are dangerous for society and for the higher education system, and could lead to its breakdown. Moreover, the behavior of institutions inevitably reflects the society to which they belong. Even though Spain is not the only country where cases of plagiarism by public officials have been identified, perhaps our society does not deem them to be very serious, which can be understood when one realizes that, in many such cases, this behavior has not been penalized. Given that Spanish politicians at the highest level from all political parties have obtained false master's and doctoral degrees and that the university hierarchy has been perceived as unwilling to do anything to remedy this, it is hardly surprising that the university system is not well regarded by Spanish society.⁵¹ The fact that legislation does not address the full spectrum of academic fraud is an important factor, but the attitude of leniency toward this problem that appears to be ingrained in our society is the first issue to be tackled.

5. Worlds that must converge

Education lies at the heart of society. But it is composed of three worlds with their own structures, codes, outlooks, languages, and valuation indices. Unless effective mechanisms of control, awareness, and information are put in place to prevent the development of unethical behaviors, these will become par for the course.⁵² Furthermore, such mechanisms must be implemented in a coordinated fashion, instead of the current situation where every institution unilaterally establishes its

⁵⁰ Boillos Pereira.

⁵¹ J. Gómez Muñoz, 'Plagios, engaños y masters fantasmas: La política española hace aguas', *France 24*, 15 September 2018.

⁵² López-Gil and Fernández López.

own measures with no communication whatsoever. This translates into an inadequate response to a general phenomenon, as well as lack of consensus on how to address such dishonest behavior. We could say that the time has come to hold a national summit and to make this a matter of ‘academic emergency’.

The three worlds that have been mentioned have different views of the problem, different ways of committing fraud, and different levels of awareness of university integrity.⁵³ However, what they have in common is a blatant lack of communication, resulting in a disorganized system and a poor understanding of the values of higher education. Whether due to laziness, overwork, or lack of training or coordination, none of the players in these three worlds seem interested in upholding the values of integrity. This stance may be a byproduct of a self-centered mindset, where everyone is completely focused on their own goals and concerns. Students resorting to plagiarism to achieve the best grades; university teachers concerned about publishing and being visible; and institutions concerned with meeting accreditation criteria and the reputation of their degrees. In short, none of them are seriously worried about the values of the education that should be their common mission.

Who should be responsible for organizing the interface between these three worlds? The institutions should be responsible for the education of students, the motivation of teaching staff, and the intellectual development of researchers, fully aware of the role they play in academia.⁵⁴ The efforts invested in educating and training professors in ethics should be as substantial as those made with regard to students and researchers. Such efforts will translate into standardized procedures, homogeneous actions, the adoption of specific measures to combat fraud, and the formulation of stronger policies designed to reduce the

⁵³ Fernández-Ramos.

⁵⁴ M. Bergadaà, *Le Temps: Entre science et création* (Caen: Éditions EMS, 2020).

extent of such practices at these educational levels.⁵⁵ Institutions have the power to adopt firm measures to reduce dishonest behaviors that discredit the validity of their degrees and research. Such mechanisms have been proposed and implemented in other places, so all that is needed is a willingness to go ahead and act. If Spanish universities do not wish to lag behind, they must come up with institutional strategies designed to encourage the establishment of ethical behavior as the norm.

6. Conclusion

It is odd that it has fallen to the media to openly address the problem and make society aware of the negative long-term effects of unethical practices. For example, the issue has been recently addressed in articles, interviews, discussions, and radio shows such as *ABC*, *El Español*, *Cadena COPE*, and *Cadena SER*, which have revealed the tricks students use to pass a class or an exam, the tools they use to plagiarize documents, and the reasons why they do it.⁵⁶ Despite the social impact, the effects of these initiatives have not yet been felt in the classroom. On the contrary, instead of feeling ashamed, students appear to be proud of their delinquent behavior. The lack of coordination and mechanisms adapted to dealing with dishonest practices in higher education, as well as the pervasive social permissiveness and leniency, appear to make this goal unfeasible. In Spain, students, researchers, and institutions alike now face a huge challenge in trying to combat a deeply rooted lax

⁵⁵ J. Sureda Negre, and others, ‘Las conductas fraudulentas del alumnado universitario español en las evaluaciones: Valoración de su gravedad y propuestas de sanciones a partir de un panel de expertos’, *Revista de Investigación Educativa*, 38(1) (2020), 201-19.

⁵⁶ ‘Silencio en la trama de los plagios’, *ABC*, 10 October 2019; ‘La picaresca en los exámenes online’, *La Tarde*, Cadena COPE, 15 May 2020; ‘Últimas noticias sobre plagio’, Cadena SER, n.d.; ‘Castells defiende que si los alumnos “copian bien” es una “prueba de inteligencia”’, *El Español*, 12 May 2020.

attitude that is so firmly rooted. But we love challenges. So let us hope that the efforts many institutions are now making will become widespread and serve as an example for all.

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A DIPLOMATIC VIEW FOR RESEARCH INTEGRITY

Sarah Carvallo

Abstract

The difficulty of implementing scientific integrity on an international scale is not just a factual problem: it expresses an internal tension in the globalisation of science faced with the pluralism of disciplines, cultures and institutions. A divide is often drawn between scientific integrity, which should be universal, and research ethics, which are always specific because they are encumbered by cultural values. However, the irreducibility of cultural differences obliges us to leave behind an idealistic or sovereignist vision of scientific integrity: it rather indicates a difference in degree between ethics and integrity, which requires the deployment of diplomacy to collectively elaborate international rules in research.*

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1. Introduction

Ethics is a thick concept, in that it involves an irreducible hierarchy of values and significations, which are structured within a determined cultural background. Within ethics, there are key concepts—such as freedom or justice—which seem to support an international consensus.⁵⁷ Integrity is one of those key concepts within the field of ethics applied to research. Just as everyone agrees that freedom and justice are necessary, every scientist agrees that integrity is important. But do we really know to what extent we agree? Although we can give negative definitions of those key concepts (freedom means no slavery or dictatorship, justice means no corruption, and integrity means no Fraud, Falsification, or Plagiarism, or FFP), nobody is able to precisely clarify their meaning or create consensus on their interpretation, as they imply different and incompatible world views. Neoliberalism, Socialism, and Marxism give different interpretations of freedom and justice. The same may be true of research integrity: there is no way to have ethics without integrity; nevertheless, research integrity is not the foundation of ethics nor does it replace ethics: it impacts research, if and only if it finds ways to make sense with researchers' ethics here and now, through the diversity of their cultures, their subjects, and their institutions. From this perspective, integrity contributes to the theoretical thickness of ethics: this situation does not condemn it to relativism or nihilism, but it explains why it is difficult to agree on its interpretation and why ethics cannot be reduced to codes or unequivocal injunctions. It opens up a hermeneutic task and calls for discriminating knowledge of the values, injunctions, and interdictions involved in research. The cultural thickness of a country, of a language, of a scientific discipline, or of a research establishment encompasses certain intrinsic values, which characterize the singularity

⁵⁷ M. Walzer, *Thick and Thin: Moral Argument at Home and Abroad* (Notre Dame, IN: University of Notre Dame Press, 1994).

of a complex symbolic structure. Therefore, every researcher must assess the issues of their research in their domain, in their institution, in their culture. Because there is no consensus on the matter of values, scientists must take responsibility for their choices: this position requires responsibility and reflexivity.

Regarding this conceptual thickness, on one hand, integrity seems to rely on universal injunctions, which apply everywhere around the globe, similar to the prohibition of incest, murder, torture, etc. Those universal obligations are transcribed into codes and charters, which are summarized in three prohibitions: no fraud, no falsification, no plagiarism. Integrity seeks to preserve and stand up for research in the face of certain potentially dangerous acts.⁵⁸ In this universal interpretation of research integrity, it should answer unequivocally to the international consensus of peers who agree on the rules that are necessary—if not sufficient—for a project to be recognized as scientific. In this way, it should express consensual criteria concerning what research should be, no matter what the subjects, institutions, country, and culture may be. Of course, this does not exhaust all the issues related to research, but it determines its hard core: without this necessary condition, a work is not scientific research. It should not be a locus of interpretation, but of application. It should apply everywhere, and these criteria should be consistent in every culture. Consequently, for some scientists, there is a frontier between ethics and integrity. Thus, Pierre Corvol writes, ‘Research integrity is not question of morals, but it is founded on universal moral principles, according to which one should not lie, steal... research integrity should not be discussed. It should be

⁵⁸ M. do C. P. Neves, On (scientific) integrity: Conceptual clarification. *Medicine, Health Care and Philosophy*, 21(2) (2018), 181-87 (p. 182).

respected: it is a professional code of conduct...'.⁵⁹ This declaration presupposes a clear distinction between ethics, which is dependent on culture, and integrity, which is universal.⁶⁰

But, on the other hand, research integrity internalizes a deep tension resulting from the globalization of science in the face of the plurality of subjects, cultures, and institutions. This tension characterizes the issue of interculturality at two levels: the first one concerns local cultures, the second specific disciplines. Although globalized and *de facto* international, science is challenged by the difficulty of supporting a claim of universal legitimacy: research integrity should be its warranty, but it needs to reconcile universal legitimacy with the realities on the ground. Although there are international organizations defending research integrity, can they claim to be universally legitimate? They must admit the plurality of disciplines, cultures, and institutions and allow space for hermeneutical interpretation. Even though international declarations and research integrity offices try to impose it as a consubstantial hard core of science, or a metaculture, they are contested. Their relative failure to impose clear norms and implement research integrity at an international level is not merely a factual problem.

In this paper, we defend a conceptual and practical distinction between science, which is universal, and research integrity, which is

⁵⁹ P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d'État chargé de l'Enseignement supérieur et de la Recherche*, 29 June 2016.

⁶⁰ Note that in English *ethics* does not distinguish professional deontology from ethics founded on practical norms and personal morals. By extension, various disciplines—including medicine—use the word *ethics* to mean professional deontology. In other words, when there are codes of ethics, there is often a confusion between ethics and deontology. M. Bergadaà, 'Évolution de l'épistémè économique et sociale: Proposition d'un cadre de morale, de déontologie, d'éthique et de responsabilité pour le marketer', *Recherche et Applications en Marketing*, 19(1) (2004), 55-72.

international. In order to understand and accept this tension between universal science and international research integrity, we propose to deploy research integrity as a kind of diplomacy; that is, a network of translations between several scientific modalities.

2. Science in the light of universal culture?

Scientific globalization internalizes a tension: does it refer to an intrinsic horizon, which would suppose that science is universal, and thus able to transcend cultural particularities, or does it correspond only to a state of affairs that imposes standardized ways of doing through a common language, common tools, and common structures (universities, calls for projects, publications)? This problem precedes and determines the issue of research integrity. It qualifies an epistemic and anthropological question in philosophy of sciences that Max Weber (1904-5) raised in his analysis of Western civilization; he considered that European modernity, characterized by scientific and economic rationality, constituted the horizon of culture: only in the West does valid science exist.⁶¹ This thesis has since been criticized at two levels: anthropological and epistemic.⁶² In both cases, critics champion science as pluralism, depending on particular cultural contexts (in the sense of

⁶¹ M. Weber, *The Protestant Ethic and the Spirit of Capitalism* (originally published in 1904-5) (New York: Pocket Books, 1991) (Foreword).

⁶² Anthropological: J. Goody, *Production and Reproduction: A Comparative Study of the Domestic Domain* (London: Cambridge University Press, 1977); J. Goody, *The Theft of History* (New York: Cambridge University Press, 2006); C. Taylor, 'Two Theories of Modernity', *The Hastings Center Report*, 25(2) (1995), 24-33. Epistemic: J. Dupré, *The Disorder of Things: Metaphysical Foundations of the Disunity of Science* (Cambridge, MA: Harvard University Press, 1993); I. Hacking, *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science* (Cambridge, UK: Cambridge University Press, 1983); H. Lacey, *Values and Objectivity in Science: The Current Controversy about Transgenic Crops* (Lanham, MD: Lexington Books, 2005).

both traditions and disciplines), without considering that pluralism clashes with scientific universality.

Due to a lack of space, we will focus on an emblematic case: geometry. Can mathematics support cultural pluralism without ruining its own universality? Karine Chemla has compared the demonstration of the Pythagorean theorem in ancient Greece with the Gou Gu construction procedure in ancient China. According to Weber, there is only one way of doing mathematics; this way was developed in the West and justifies the fact that Western mathematics is taught all around the world. In this case, the Gou Gu procedure is not really a demonstration and does not prove a theorem, because it deals with a particular kind of triangle (the base—*gou*—of which is 3 chi and the height—*gu*—of which is 4 chi). Or is it the *same* demonstration in two different ways? The comparative study concludes that it is the *same* theorem, if you do not assume a European monopoly on science and rationality.⁶³

This particular case corresponds to the general issue raised by ethnohistory: how do we recognize geometry, when it takes such different forms in other cultures, such as string games, mandalas, or drawings on sand?⁶⁴ And this problem refers in its turn to the cultural conditions under which science develops: why, for example, did science did not develop as fast in China as in Europe, even though it was at least as advanced in the East as in the West in Antiquity, and considering that the Chinese already had printing at their disposal? Scientist, Sinologist, and historian of ancient and modern sciences in China Joseph Needham

⁶³ K. Chemla, 'Penser sur la science avec les mathématiques de la Chine ancienne', in *La pensée en Chine aujourd'hui*, ed. by A. Cheng (Paris: Gallimard, 2007), pp. 374-80.

⁶⁴ M. Ascher, *Mathematics Elsewhere: An Exploration of Ideas Across Cultures* (Princeton, NJ: Princeton University Press, 2002); M. Chemillier, *Les mathématiques naturelles* (Paris: Éditions Odile Jacob, 2007).

explains this difference by two sorts of cultural conditions.⁶⁵ Europeans value science as essential in relation to a certain conception of truth and power: thus, scientists benefit from high social, institutional, and symbolic recognition. Meanwhile, the Chinese value poetry and political sciences more; they do not set much store by discoveries or scientific professions.⁶⁶ In addition, they are more interested in practical sciences related to their own historical context (e.g. seismology, botany, medicine). More generally, historical studies have shown that there are national styles in scientific research.⁶⁷ Even if it is universal, science cannot be removed from its cultural dimension. Contemporary scientists often forget this and conflate the two dimensions: the universal and the international. Therefore, it is not surprising that research integrity must necessarily face the question of interculturality at the exact moment when it tries to enact international norms, at the risk of conflating the universal and the international.

Many institutions promote international charters: are they now universal, in the same way as science is? This ambiguous claim is rooted in medical ethics, starting with the Nuremberg Code (1947), which assumes a view of humanity supposed to be universal, in concert with the promulgation of the Universal Declaration of Human Rights in 1948.⁶⁸ Promoted by the World Medical Association and updated

⁶⁵ J. Needham, *Science and Civilisation in China, Vol. 2, History of Scientific Thought* (Cambridge, UK: Cambridge University Press, 1956).

⁶⁶ *La pensée en Chine aujourd'hui*, ed. by A. Cheng (Paris: Gallimard, 2007); T. Zhao, 'Une analyse philosophique du concept Monde. Empire en termes de Tout sous le ciel', in *Le renversement du ciel—Parcours d'anthropologie réciproque*, ed. by A. le Pichon and M. Sow (Paris: CNRS Éditions, 2011).

⁶⁷ M. J. Nye, 'National Styles? French and English Chemistry in the Nineteenth and Early Twentieth Centuries', *Osiris*, 8 (1993), 30-49; J. Harwood, *Styles of Scientific Thought: The German Genetics Community, 1900-1933* (Chicago: University of Chicago Press, 1993).

⁶⁸ United Nations, *Universal Declaration of Human Rights*, 1948; Carvallo, S., 'Enjeux transculturels de la mondialisation', in *L'ingénieur citoyen: Synergies*

several times, the Declaration of Helsinki (1964) internationalizes ethical criteria for research and considers its own particular conceptions to be universal. The Belmont Report proposes three supposedly universal principles—respect for persons, beneficence (with the sub-principle of nonmaleficence), and justice—in order to provide a structure and some rules for research with and care of human beings.⁶⁹ Because it is supposed to be founded on a neutral conception of the human being, this principles-based approach is meant to go beyond cultural differences and values.⁷⁰ This conception recurs in the International Ethical Guidelines for Biomedical Research Involving Human Subjects promoted by the Council for International Organizations of Medical Sciences (CIOMS) in 2002 and 2016. In 2005, it led to the universal Declaration on Bioethics and Human Rights by UNESCO.⁷¹ This conception of universality has been strongly contested in the domain of ethics as a deviation or a new form of imperialism that imposes a Western viewpoint of the rational autonomous individual.⁷² Yet research integrity has returned to this principles-based approach and

entre les langues-cultures et les sciences humaines dans la formation de l'ingénieur du XXI^e siècle, ed. by D. Bottineau, M. di Tillo Lacruz, and J. Eschenauer (Paris: Presses des Ponts, 2018).

⁶⁹ Commission nationale pour la Protection des sujets humains dans le cadre de la recherche biomédicale et comportementale, *Rapport Belmont: Principes éthiques et directives concernant la protection des sujets humains dans le cadre de la recherche*, 1979; T. L. Beauchamp, and J. F. Childress, *Principles of Biomedical Ethics* (Oxford: Oxford University Press, 1979).

⁷⁰ R. Gillon, 'Medical Ethics: Four Principles Plus Attention to Scope', *The BMJ*, 309(6948) (1994), 184-88 (p. 188).

⁷¹ UNESCO, *Recommendation on Science and Scientific Researchers* (Paris: UNESCO, 2017).

⁷² K. K. Haggerty, 'Ethics Creep: Governing Social Science Research in the Name of Ethics', *Qualitative Sociology*, 27(4) (2004), 391-414; Z. M. Schrag, *Ethical Imperialism: Institutional Review Boards and the Social Sciences, 1965–2009* (Baltimore, MD: Johns Hopkins University Press, 2010).

formulated international criteria for research without claiming to establish the virtues of a player, but only their duties as a researcher. On one hand, in comparison with bioethics, it has abandoned the domain of values and restricted its own field in order to consider only duties. But on the other hand, it has opened and extended the field, in the sense that research integrity claims to deal with all subjects (human and social sciences and natural sciences).

During the same period, the research community as a whole became aware of misconduct as a result of investigations in the field.⁷³ The World Conferences on Research Integrity (WCRIF) aim to bring together researchers from all the countries in the world and from every discipline in order to identify consensual international criteria against misconduct, such as honesty, responsibility, professional courtesy, impartiality, and good administration of research, with an additional fourteen professional responsibilities (Singapore Statement on Research Integrity).⁷⁴ The 2007 conference highlighted how important it is to clarify and publish standards promoting good practices and procedures allowing one to identify bad practices.⁷⁵ At the European scale, All

⁷³ W. Broad and N. Wade, *Betrayers of the Truth: Fraud and Deceit in the Halls of Science* (New York: Simon & Schuster, 1982 ; B. C. Martinson, M. S. Anderson, and R. de Vries, 'Scientists Behaving Badly', *Nature*, 435(7043) (2005), 737-38; M. S. Anderson, B. C. Martinson, and R. De Vries, 'Normative Dissonance in Science: Results from a National Survey of US Scientists', *Journal of Empirical Research on Human Research Ethics*, 2(4) (2007), 3-14; M. S. Anderson, and others, 'Research Integrity and Misconduct in the Academic Profession', in *Higher Education: Handbook of Theory and Research: Volume 28*, ed. by M. B. Paulsen (Dordrecht: Springer Netherlands, 2013), pp. 217-61.

⁷⁴ World Conferences on Research Integrity, *Singapore Statement on Research Integrity*, 22 September 2010.

⁷⁵ T. Mayer and N. Steneck, *Final Report to ESF and ORI: First World Conference on Research Integrity: Fostering Responsible Research* (Lisbon, Portugal, 16-19 September 2007), November 2007 (p. 1).

European Academies (ALLEA) enacted a code of conduct referring to reliability, honesty, respect, and responsibility. Theoretically speaking, Resnik justifies the need for international standards in order to bring research into line with high value norms and transform bad research practices into good ones.⁷⁶ He makes four arguments: (1) if science is international, we need standards able to transcend national borders in case of disagreements between researchers from different countries; (2) in the absence of local standards, researchers can and must refer to international ones; (3) the presence of international standards will enhance the development of local standards; and (4) those criteria contribute to enhancing trust between scientists working in different countries. Therefore, there is a need for a written document that can be used as a reference at the international, national, and local scales and for all subjects.

Nevertheless, this concern with international agreement faces two difficulties linked with the original confusion between international and universal. First, when a concept such as research integrity seeks to enlarge its extension, it runs the risk of shrinking its intension. Indeed, Kathinka Evers shows how the trap of analyticity may ruin the attempt to formulate a universal and definitive description of research integrity.⁷⁷ The more one searches for a consensus on general norms, the more one is compelled to reduce its substantial claims, because they always refer to the specificity of each subject and culture. Second, even though we may suppose that there are some common norms accepted by all scientists as scientists, the fact remains that the meaning of responsibility or plagiarism or the very definition of misconduct changes according to culture. Let us conclude. As it relates to research practices, research integrity cannot purport to be universal in the same sense as

⁷⁶ D. B. Resnik, 'International Standards for Research Integrity: An Idea Whose Time Has Come?', *Accountability in Research*, 16(4) (2009), 218-28.

⁷⁷ K. Evers, *Codes of Conduct. Standards for Ethics in Research*, October 2004;

mathematics is. But since science is not only universal but international—a distinguishing feature of science as a historical reality since the end of the Second World War—research integrity must be international too. But how?

3. An accepted plurality

Many studies show that scientific integrity, conceived of as an international ethical norm, is often not formulated properly to deal with the reality of research. The explanation is easy: a norm falls within the jurisdiction of reference, while integrity is supposed to transcend cultural specificities. Thus, Resnik and his colleagues compared national regulations and observed considerable disparities between definitions of misconduct in research. A regulatory gap exists between the European Union, Japan, and the United States concerning post-marketing studies of drugs.⁷⁸ The PRINTEGER project investigated documents and laws within several member countries of the European Union and concluded that the notions, definitions, field of application, and extent of research integrity and misconduct changed according country.⁷⁹ In 2019, the French Senate carried out a comparative survey concerning the definition and organization of research integrity in France, Denmark, Italy, Germany, and the Netherlands.⁸⁰ The report explained the diversity of choices made by the variety of organizational and legal cultures of each state, but also by the timing of implementation of their own research integrity system. Earlier legislation and organization shape more recent orientations. Two countries chose a legal approach: Italy

⁷⁸ Urushihara, H., and others, 'Bridge the Gap: The Need for Harmonized Regulatory and Ethical Standards for Postmarketing Observational Studies', *Pharmacoepidemiology and Drug Safety*, 26(11) (2017), 1299-306.

⁷⁹ G. G. Fuster, and S. Gutwirth, *Promoting Integrity as an Integral Dimension of Excellence in Research. D II.4 Legal Analysis*, 2016 (p. 26).

⁸⁰ <http://www.senat.fr/lc/lc288/lc2880.html>.

updated a penal law dating from 1925; in case of plagiarism, it stipulated a prison sentence. After striving to regulate failures of research integrity since 1992, Denmark enacted a law on research dishonesty in 2017. The other three countries preferred the contractual approach. In 2018, the Netherlands published a code that was ‘strict in its legal writing, precise in its prescriptions, and concerned with distinguishing between the personal obligations of each researcher in their own field and the collective responsibilities of institutions’. Germany favored a model of engagement, whereby calls for projects are submitted through the German foundation for research (Deutsche Forschungsgemeinschaft, DFG), which is an original institution in the field of research, as it is not a state institution but a non-profit organization. The United Kingdom opted for a flexible model of self-regulation (the Concordat to Support Research Integrity) coordinated by Universities UK (UK Research Integrity Office, UKRIO). Considering that, for the moment, there is no legal definition of research integrity, France applies a national policy, with frames of reference, referees, and a research integrity office (Office français de l’intégrité scientifique, OFIS), in order to supervise the implementation of international standards.⁸¹ A topic for discussion is whether OFIS is really independent of HCERES, the organization dedicated to the evaluation of research, inasmuch as OFIS is a department of HCERES.⁸²

This diversity among countries applies even more to the various subjects and professions involved in research. Can research integrity be applied in the same way in musicology, mathematics, medicine, literature, engineering sciences, anthropology, informatics, philosophy,

⁸¹ OFIS, <https://www.hceres.fr/fr/ofis>.

⁸² P. Henriët, P. Ouzoulis, and G. Longuet, *Office parlementaire d’évaluation des choix scientifiques et technologiques—Communication de MM. Pierre Henriët, député, et Pierre Ouzoulis, sénateur, sur leur rapport Intégrité et publications scientifiques*, Compte rendu n° 77, 9 July 2020.

economics, law, archeology, etc.? Of course, one may admit that each discipline demands respect for research integrity, but do they mean the same thing across disciplines? We may first note that even the scientific nature of each subject is not defined unequivocally: it is true that they are all academic, in the sense that they are taught at the university (following the German definition of science as *Wissenschaft*, or academic topics), but we would struggle to define a common method.⁸³ Incidentally, some fields do not even claim to be sciences: for example, the scientific nature of philosophy is still under discussion. Moreover, it is not clear if it belongs to the social sciences or not.⁸⁴ And there are also strong cultural differences: is there a French or a German philosophy?⁸⁵ Along the same lines, since the nineteenth century, an important debate has divided economics: under what conditions is it a science?⁸⁶ Based on his involvement in European research projects, Ron Iphofen highlights a kind of anesthesia among economists regarding their responsibility; meanwhile, their results inform political decisions.⁸⁷ Is it really honest that the great majority of economists share the same ideological posture? Does this unanimous theoretical choice undermine the reliability of their work, in the absence of discussions for and against within the economic community? It also highlights a deep tension

⁸³ B. Readings, *The University in Ruins* (Cambridge, MA: Harvard University Press, 1996).

⁸⁴ C. König-Pralong, 'L'histoire de la philosophie appartient-elle au champ des sciences humaines et sociales?', *Revue d'histoire des sciences humaines*, 30 (2017), 49-70; G. Calafat, C. Lavergne, and É. Monnet, 'Philosophies et sciences sociales: Les enjeux de la conversion', *Tracés*, 13 (2013), 7-25.

⁸⁵ J.-L. Fabiani, *Qu'est-ce qu'un philosophe français? La vie sociale des concepts (1880-1980)* (Paris: Éditions de l'École des Hautes Études en Sciences Sociales, 2010).

⁸⁶ Boyer, R., *Économie politique des capitalismes: Théorie de la régulation et des crises* (Paris: La Découverte, 2015).

⁸⁷ *Handbook of Research Ethics and Scientific Integrity*, ed. by R. Iphofen, (Cham, Switzerland: Springer International Publishing, 2020).

between public official assertions in favor of research integrity and the efficiency of the publish or perish injunction: ‘*Unless the important academic journals assess this routinely (with sanctionable consequences), the profession is unlikely to change given that “publish or perish” acts as an overriding incentive.*’⁸⁸ Awareness of the risk of dishonesty varies in different fields. Although physicians have long been aware of those injunctions, particularly because they faced some serious scandals, this is not the case in all fields.

Other difficulties appear when politicians and the media meddle in science, as we observed recently during the COVID-19 pandemic when the French government and some presidents of other nations got involved in giving advice.⁸⁹ In France, the affair concerning Professor Didier Raoult’s claims concerning treatment with hydroxychloroquine for COVID-19 triggered a triple tension between medical deontology, research ethics, and research integrity in a context where science could no longer function autonomously.⁹⁰ On the integrity side, the fact that he co-authored more than 3,500 papers raised questions about the legitimacy of his signature, the quality of his publications, the holding of multiple positions, and conflicts of interest (e.g. publishing in a journal for which he was a member of the editorial committee).⁹¹ From the perspective of science as a public institution, a question concerns the legitimacy of the incentive created by the Sigaps bibliometric system used to calculate government grants for university hospitals, because

⁸⁸ Iphofen, ed. (p. 743).

⁸⁹ A. London, and J. Kimmelman, ‘Against pandemic research exceptionalism’, *Science*, 1 May 2020.

⁹⁰ Henriët and others.

⁹¹ H. Pearson, ‘How COVID Broke the Evidence Pipeline’, *Nature*, 12 May 2021; Y. Gingras, and M. Khelifaoui, ‘Être juge et partie, ou comment contrôler une revue scientifique’, *The Conversation*, 21 June 2020; A. Marcus, and I. Oransky, ‘The Science of This Pandemic Is Moving at Dangerous Speeds’, *Wired*, 28 March 2020.

certain hospitals received national grants depending directly on Raoult's notoriety and impact factor. For his own part, Raoult has blamed the partiality of medical research, which is partially funded by pharmaceutical laboratories. Even though they focus on specific individuals, these questions in fact transcend particular individual cases and concern the whole medical research system. And we have to admit, that for a few weeks during the public health crisis, most people felt that research integrity was secondary to the pandemic emergency. More generally speaking, as soon as research becomes interesting to societal stakeholders (government, journalists, organizations, industry), research integrity criteria are severely tested.

4. Avenues for resolution

There are three possible avenues to reconcile research integrity with cultures (traditional or disciplinary).

The first option corresponds to the choice made by the big research organizations: enacting international ethical norms, which serve as benchmarks; instituting international and national offices and observatories; establishing ombudspersons or referees at the international, national, and local levels; and implementing systems of penalties within the research institutions. This option is the most obvious and the easiest; it has been applied since 2007. But, as we have seen, this approach is not sufficient and it faces a major harmonization problem. At the national and local scales, definitions and legislation are sometimes not congruent; disciplinary measures or national and local actions may be incompatible. Even though there have been calls to harmonize rules within the pharmaceutical domain (International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use, ICH), genomics, nano-medicine, and the regulation of scientific data—particularly genetic data—it is evident

that differences still persist at the international level.⁹² Thus, data protection law is developing and diverging in Europe, the United States, and China. Of course, the European Union is trying to harmonize regulations within the European academic network, but discrepancies are increasing at the international level, with serious financial and legal consequences; therefore, researchers and research organizations find themselves with very different duties depending on where they are.

The second option consists in making research integrity a scientific culture that should be shared by all researchers, a kind of deontological metaculture that would serve as the common melting pot for all disciplines and traditional cultures. This approach emphasizes the stakeholders' responsibility: they must be educated and trained to assume their own duties not only in terms of academic excellence, but also in terms of honesty, responsibility, impartiality, and professional courtesy. Developing those professional soft skills would allow researchers to avoid a logic based on supervision and sanction, by inculcating behaviors that spontaneously respect rules. *Mutatis mutandis* there would be a kind of *ethos*, a set of professional norms as described by Merton, when he generalized his historical study of the Royal Society of London in the seventeenth century to science itself; these norms include communalism, universalism, organized skepticism, and

⁹² International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH), *Harmonisation for Better Health*, 2020; J. A. Molzon, and others, 'The Value and Benefits of the International Conference on Harmonisation to Drug Regulatory Authorities: Advancing Harmonization for Better Public Health', *Clinical Pharmacology and Therapeutics*, 89(4) (2011), 503-12; D. Townend, 'Conclusion: Harmonisation in Genomic and Health Data Sharing for Research: An Impossible Dream?', *Human Genetics*, 137 (2018), 657-64.

disinterest.⁹³ By *ethos*, Merton does not mean ethics but rules imposed by the scientific community: all researchers must observe them or be subject to sanction. If deviance exists, and therefore deviant scientists, the scientific community is in charge of regulating and setting things right, even excluding deviant scientists from the community. But did this *ethos* ever really exist? Does it not represent an ideal, the image that scientists project about what they would like to be? And sometimes ideals are counterproductive.

In order to test this claim that a scientific *ethos* exist, some surveys have investigated whether, concretely, deviance is rare and therefore does not cast doubt on the general description of science promoted by Merton, or whether it actually occurs frequently.⁹⁴ The investigation of scientists' regular behaviors indicates that problems are frequent enough that we cannot consider misconduct only as an accident. Moreover, those same studies show that misconduct is not always punished. Finally, recent surveys highlight that the current conditions of competition, urgency, excellence, and double-bind situations in which individuals and teams must work heighten the risks of misconduct.⁹⁵

⁹³ R. K. Merton, 'The Normative Structure of Science', in *The Sociology of Science: Theoretical and Empirical Investigations*, ed. by R. K. Merton (2nd edition) (Chicago: University of Chicago Press, 1973), pp. 267-78.

⁹⁴ I. I. Mitroff, *The Subjective Side of Science: A Philosophical Inquiry into the Psychology of the Apollo Moon Scientists* (Amsterdam: Elsevier, 1974) ; Martinson and others; Anderson and others, 'Normative Dissonance'; K. J. Galbraith, 'Life After Research Misconduct: Punishments and the Pursuit of Second Chances', *Journal of Empirical Research on Human Research Ethics*, 12(1) (2017), 26-32.

⁹⁵ D. Fanelli, 'Do pressures to publish increase scientists' bias? An empirical support from US States data', *PLoS One*, 5(4) (2010), Article e10271; S. Chatelain-Ponroy, and others, 'Is Commitment to Performance-Based Management Compatible with Commitment to University "Publicness"? Academics' Values in French Universities', *Organization Studies*, 39(10) (2018), 1377-401.

Anyway, transforming the scientific culture cannot result from a decision at the top and must necessarily involve a general and radical approach, such as slowing down science and organizing the use of scientific data in other ways, as Sabina Leonelli highlights in her field surveys, in which she calls for slow science.⁹⁶

The third option seems more promising to us. It would aim to introduce a kind of diplomacy between researchers, teams, and institutions. Maintaining diplomatic relations entails not accepting and imposing others' criteria on ourselves but rather agreeing to listen to what others want to tell us about themselves and about us, according to their own viewpoint. This attitude requires renouncing the sovereignty model: nobody knows what to do. Research integrity is not universal *a priori* in itself but shapes a perspective that researchers build together by assuming the plurality of science. Of course, research integrity—in the sense of a set of consensual standards—is international, but it is not universal. It looks rather like Globish—global English—which is neither the English language nor a universal language such as mathematics but expresses a relation of power, which was historically and politically established in the scientific and economic fields at the global level.⁹⁷ As a globalized language, Globish is used as a bartering system between languages and translations, but it also distorts them, and English most of all. Research integrity creates a platform for discussions; yet we should at least discuss. This is the issue for diplomacy: agreeing to listen and to understand why scientists resort to misconduct in particular contexts. Accepting that there are diplomatic crises, for example, when a

⁹⁶ H. Chneiweiss, and others, 'Fostering Responsible Research with Genome Editing Technologies: A European Perspective', *Transgenic Research*, 26(5) (2017), 709-13; S. Leonelli, *Data-Centric Biology. A Philosophical Study* (Chicago: University of Chicago Press, 2016).

⁹⁷ J.-P. Nerrière, *Parlez Globish! Don't Speak English* (Paris: Eyrolles, 2006); B. K. Sharma, 'World Englishes, English as a Lingua Franca, and English Pedagogy', *Journal of NELTA*, 13(1-2) (2011).

researcher transgresses against the pact, as Olivier Voinnet did at the CNRS (French national center for scientific research) and the Zurich polytechnic: this crisis does not concern one individual alone but the whole institution, not forgetting the scientific journals—even the highest-ranked ones—and the international scientific community.⁹⁸ Implementing an interpretation strategy requires us to learn how to think from other people's perspective. This diplomatic approach demands that we recognize the thickness of research integrity.

Being diplomatic means endorsing the idea of irreducible differences (differences in local cultures or subjects, divergent interests) and trying to build some spheres of consensus, which are neither always exactly the same nor uniform according to the various geopolitical scales. It entails learning some lessons from cultural anthropology. There are various levels of thickness within human phenomena, which never reduce to mere natural or physical facts.⁹⁹ If, as Aristotle said, fire burns the same way everywhere, in Persia and in Greece, values, norms, and laws are always lodged within a particular history and society, which give them their specific thickness, which remains irreducible. There may be a thin description of burning, but not of traditions or laws, which always involve a hermeneutical approach.

5. Conclusion

We are honest or dishonest neither *naturally nor necessarily*, but intentionally: we have the intention of being honest or dishonest. Otherwise, in cases of FFP, there would be no fault but only error. This intention requires interpretation: what is the agent's intentionality? Gilbert Ryle, an analytic philosopher of mind, proposes distinguishing

⁹⁸ Wikipedia, 'Olivier Voinnet', *Wikipédia*, 2020.

⁹⁹ V. Descombes, 'L'idée d'un sens commun', *Philosophia Scientiae*, 6(2) (2002), 147-61.

between thick and thin concepts in order to link together two levels of action; he uses three examples.¹⁰⁰

- Let us consider two boys winking: the first one because he suffers from twitches, the second because he wants to give a signal. It is the same action; the eyelid makes the same movement; but it has two distinct meanings. Understanding the former case means linking it to its root cause, that is, explaining it; understanding the latter means relating it to an intention, which necessarily involves interpretation. The observer does not know *a priori* if this winking is a twitch or a signal: he must identify the intention. When the boy winks in order to communicate, he does not engage in two different actions (winking and communicating), but one and the same action.
- Let us now consider two persons who are thinking: a tennis player concentrates on the action he is making, while Rodin's *Thinker* seems to have abandoned his urgent tasks in order to think. In the first case, the thought serves the action; in the second, it is its own goal. By analogy, research integrity serves science; it does not define some other or higher goals for science but the mere necessary conditions that permit science to develop over the long term. When a scientist respects research integrity, her intentions look like the tennis player's. In the same vein, ethics introduce values, which may prohibit or guide research on specific subjects or goals: consider, for example, the field of research concerning gender, which has grown so fast in the last fifty years, or the current research on SARS-CoV-2. Research integrity and ethics are not equally thick; nevertheless, both are thick.

¹⁰⁰ G. Ryle, *The Concept of Mind* (London: Hutchinson's University Library, 1949).

- In the third example, Ryle presents a soldier and his officer who orders him to lower his gun. The soldier does not lower his arms because he has a cramp; the officer does not ask him to obey in general. Here, obedience has a specific content and can be assessed only in terms of that content. The soldier's obedience implies two dimensions: the act of lowering his weapon, and the relationship between the officer and the soldier, which presupposes his submission to the military authority. In other words, the act makes sense only under the condition of the obligation to obey. But nobody can obey in absolute terms. Lowering his weapon when the officer calls for it requires the soldier first to internalize the relationship of obedience/authority which binds him with the officer. And the soldier can always disobey; in fact, sometimes he must disobey for higher reasons having to do with ethics. The action has thickness. This also applies to research integrity: not committing fraud, falsification, or plagiarism does not describe an intrinsic property of research; someone may break these interdictions; and the interdictions are relevant only in practical and local situations depending on the discipline. Not committing FFP may look quite different in philosophy or in biology, in mathematics or in chemistry, in archeology or in literature. Research practices possess thickness, which always implies that one must first have learned what research means, just as soldiers learn why they must obey. These three examples show that research can be described at different levels: research can never be reduced to a reflex or a mere fact. It always implies intentions, but those intentions do not deal with the same issues. So, we must distinguish between research integrity, which requires the intention in the service of research,

and ethics, which includes the consideration of other values than just research itself.

Research integrity is not universal in the same way as mathematics, but it is expressed through international rules. No ongoing monitoring or administrative penalty from outside or from above can ensure that a laboratory or a publication will respect the research rules. Peers must get involved in identifying and establishing the criteria when they analyze the thickness of research practices. As an anthropologist interprets winking or a soldier's behavior, peers must understand research practices within the specific culture of a discipline, a country, or an institution. Here are the issues for diplomacy: how can we build a common world despite our diverging interests and different cultures? If conflicts between (local or discipline-based) cultures, financial pressure, legal regulations, and obligations toward research integrity generate contradictory duties, those tensions weaken the whole system. This is a risk for research. Diplomacy does not claim to impose an international justice, which in fact has no jurisdiction and no way of being imposed. Instead, it tries to identify the potential risks raised by internal contradictions and to establish some areas for mediation. There is no international court of ethics. Research integrity and ethics do not differ in nature but only in degree of thickness. Interculturality does not mean a danger for research integrity but is a reality that requires us to abandon an idealist or nationalist view of science in order to implement research policies that take disciplinary and cultural diversity into sufficient account. In this view, diplomacy may contribute to developing right knowledge, in the double sense of correct and of just.

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WHAT MODELS OF INTEGRITY SHOULD DOCTORAL SCHOOLS APPLY?

Pierre-Jean Benghozi

Abstract

The counterpart of academic freedom and scientific autonomy is personal and collective responsibility. This responsibility must be based on contractual foundations in relation to the objectives of knowledge. Ensuring scientific integrity therefore requires the institutionalisation of integrity practices, rather than a mechanical incentive to ethical behaviour. This implies first sharing a reference framework with all actors, and then setting up action mechanisms. The following chapter emphasises the importance of initiating integrity procedures in institutions through the certification of doctoral schools: it presents the various types of action to which institutions must respond in the face of possible breaches: guiding principles, involvement of managers, communication, monitoring and control, training, handling of complaints and sanctions.*

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1. Introduction

In just a few decades, the rapid development of information and communication technologies and the increase in international contacts and economic standpoints have changed the world of knowledge and, consequently, the attention paid to fraud risk requirements.¹⁰¹ These changes demand scientific approaches consistent with current conditions and everyday practices. All academic institutions build their image and ensure their attractiveness, nationally and internationally. Therefore, they must be able to exhibit their credibility, the quality of their teaching, the distinction of the degrees they award, and the excellence of their researchers.¹⁰² This quest for quality and recognition is particularly clear-cut in graduate training and doctoral schools, which are the first step in autonomous knowledge production: they guarantee both the training of students and the preparation of future professors and research professionals.

In the face of the various ethical scandals that have shaken different countries over the past few years, the requirement for transparency was first imposed on companies via corporate social responsibility (CSR).¹⁰³ It is now inescapably required of universities and schools in what I would call university social responsibility (USR), if not, more broadly,

¹⁰¹ P.-J. Benghozi and M. Bergadaà, 'Métier de chercheur en gestion et web: risques et questionnements éthiques', *Revue française de gestion*, 220(1) (2012), 51-69.

¹⁰² L. Granget, 'La responsabilité sociale des universités à l'heure du savoir comme marchandise. Le discours des universités françaises sous l'angle de la communication marketing: Entre utilité publique et séduction marchande', *Communication et organisation. Revue scientifique francophone en Communication organisationnelle*, 26 (2005), 127-47.

¹⁰³ A. Acquier, T. Daudigeos, and B. Valiorgue, 'Corporate Social Responsibility as an Organizational and Managerial Challenge: The Forgotten Legacy of the Corporate Social Responsiveness Movement', *M@n@gement*, 14(4) (2011), 222-50.

academic social responsibility (ASR). Contemporary forms of research production increase interactions between individuals who have very different capacities, depending on their position, to take advantage of the new context: accordingly, we observe a broadening of individual strategies in knowledge-based organizations and economy.

One of the paradoxical consequences is that researchers and research structures no longer appear only as backers of progress and caretakers of indisputable truths: they also appear as advocates of their own interests in a science market influenced by increasing individualization and mediatization. Yet in applying academic responsibility, researchers should know how to act in the interest of knowledge, notwithstanding the shortcomings of a system that allows personal interest to come first. As Bouquin notes, being responsible means plugging the gaps in an organizational system that cannot anticipate and control everything. All the more so as such gaps are essential since they help foster researchers' creativity and professors' pedagogical freedom.¹⁰⁴

1.1 What frameworks and guiding principles should an academic integrity program have?

In the classical approach to management, the definition of objectives follows specified principles that delimit the manager's responsibility. Very early on, Fayol noted that 'responsibility is a corollary of authority, its necessary counterpart'.¹⁰⁵ The higher one rises in the corporate hierarchy, the more complex the operations, the greater the number of players involved, the more distant the final result, and the more difficult it is to identify the role played by the initial act of authority in the effect produced, and to establish the degree of responsibility the manager has. If scientific communities fail to define and take charge of such issues

¹⁰⁴ H. Bouquin, *Les fondements du contrôle de gestion* (4th ed.) (Paris: Presses universitaires de France, 2011).

¹⁰⁵ H. Fayol, 'Administration industrielle et générale', *Bulletin de la Société de l'Industrie Minérale*, 10 (1916), 5-164.

themselves, there is a risk of creating an ‘administrative responsibility’ that shrinks scientific responsibility and control.¹⁰⁶ Consequently, new managerial doctrines advocate an obligation for researchers, as for all public stakeholders, to be accountable for their actions and performance, and face the possibility of sanctions.¹⁰⁷

Universities are not the only ones facing such challenges. When it comes to social responsibility, the word ‘accountability’ is becoming increasingly common in both private and public organizations. It is therefore not surprising that we must consider the management of integrity issues from this angle in universities as well: it combines the need for transparency and the responsibility of stakeholders. Garfinkel emphasized that the accountability for action in society is both, and simultaneously, the result of an operation and this operation itself, the end and the means.¹⁰⁸

Self-affirmation of excellence is no longer enough. Now that their competence and their scientific and technical legitimacy are being questioned, researchers have to explain how they work and are sponsored.¹⁰⁹ Science must now accept accountability as a key dimension of its mission, in terms of research choices as well as the integrity of its practices. It is therefore imperative for all institutions of higher education to anticipate the current trends by committing to transparency and introducing structured academic integrity programs. Responding to these challenges must therefore be part of the strategic

¹⁰⁶ To situate the responsibility of managers, the theory of management control distinguishes between two terms: *accountability* means the obligation to report and give an account, *responsibility* implies being the backer (and answerable) for a result, assuming that some form of assessment exists.

¹⁰⁷ P.-J. Benghozi, *Accountability in Research*, EIASM Symposium, Brussels, 2005.

¹⁰⁸ H. Garfinkel, *Studies in Ethnomethodology* (Englewood Cliffs, NJ: Prentice-Hall, 1967).

¹⁰⁹ For example, the questioning of the work carried out on GMOs.

orientation of all institutions. This approach establishes sense, trust, and motivation, internally, and contributes to the institution's reputation and attractiveness, externally.

But in a context of risks and uncertainties, no formal criterion can perfectly measure the quality and integrity of a research study. The counterpart of academic freedom and scientific autonomy is personal responsibility. This responsibility is therefore based on contractual foundations with respect to the aims and objectives envisaged in science. Hence, it calls for thinking about integrity in terms of mechanisms and not just of major ethical principles. Ensuring scientific quality and integrity implies an institutionalization of this capacity for self-evaluation, rather than a routine incentive for ethical or responsible behavior, focused solely on the formal or quantitative evaluation of results.

Such an institutionalization of integrity practices implies a two-step approach. First, it means affirming a doctrine, or 'sense making and providing meaning', as some authors would say: this contributes to creating and sharing a reference framework with research practitioners' institutional environment. The next step is to implement practical and management solutions based on these principles of action and regulation.¹¹⁰

1.2 Scope: Integrity violations

An integrity program must prevent practices that are contrary to academic norms. The first requirements are thus to define guiding principles and make them explicit. Unacceptable practices can be engaged in by students, supervisors, and researchers: from fraud and plagiarism to harassment and negligence in the monitoring and control

¹¹⁰ P.-J. Benghozi and M. Bergadaà, 'Publications et plagiat à l'ère d'Internet: Réponses collectives à de nouvelles pratiques', in *Le plagiat de la recherche scientifique*, ed. by G. Guglielmi and G. Koubi (Paris: LGDJ Éditions, 2012), pp. 207-21.

of theses. This is particularly true in doctoral schools, where researchers are trained; difficulties and tensions arise daily and call for intervention. Some are directly linked to the attitude of doctoral students, others to the thesis supervisor, and still others to the changes in management indicators and the definition of certain behaviors as misconduct that were previously considered acceptable.

As Bergadaà notes, an attitude of integrity or, conversely, practices of academic delinquency take root during the doctoral years.¹¹¹ Therefore, a program must establish preventive policies to reduce students' temptations to engage in fraud or bad practices in their research and publication activities. For supervisors and researchers, it is then a matter of establishing preventive, remedial, and punitive mechanisms to promote good practices in the supervision and training of doctoral students, as well as to reduce as much as possible the risks of plagiarism in their own work. Most of us have had to deal with multiple cases and situations. In the box below, we present a non-exhaustive list of the main problems or difficulties that doctoral schools and institutions must recognize and be able to respond to.

The most common breaches of integrity in doctoral schools

Fraud in the production of scientific knowledge¹¹²

Invention of research results; invention or intentional falsification of quotations or data; intentional misrepresentation of research results; exclusion of source data without reporting it; concealment of conflicts of interest, financial arrangements, or collaborations that could influence scientific results; collaborative arrangements that do not preserve the

¹¹¹ M. Bergadaà, *Le plagiat académique: Comprendre pour agir* (Paris: Éditions L'Harmattan, 2015).

¹¹² Some points are taken from the ULiège Ethics and Scientific Integrity Charter: preventive aspects aiming to guarantee scientific integrity—procedure to follow in case of a breach of scientific integrity—constitution of the Ethics and Scientific Integrity Council.

supervisor's and/or doctoral student's independence of judgment, restrict the freedom to publish, or impose on the supervisor or doctoral student a right of review of publications beyond what is reasonably required to protect intellectual property rights; appropriation of results, analyses, data, and ideas in an abusive and/or unsourced and undocumented manner; sabotage of the work of other doctoral students or colleagues; abusive complaints against colleagues, the supervisor or other researchers; lack of protection of doctoral students from theft of their work (within the institution or at conferences or seminars).

Publication fraud¹¹³

Submission of a thesis or parts of a thesis purchased from others or done by proxy (dissertations purchased online, making use of paid authors, etc.); publishing under one's own name the results of work and discoveries made by others (plagiarism); claiming or accepting the status of co-author of a publication without having made essential contributions; deliberately omitting the names of other authors or collaborators in the project who have made essential contributions; intentionally listing a person as a co-author when they have not contributed to the project; intentionally misquoting the existing or purported work of others; misrepresenting the status of one's own publication.

Abuses in thesis supervision

Lack of responsibility on the part of thesis supervisors who leave their students to their own devices: lack of guidelines on the management of their project and the development of their theses, lack of follow up on the quality of the work done and the research methods adopted, lack of support or advice in the various stages (communications in conferences, methodology, readings, etc.); overly directive attitude in supervision, systematically preventing students from becoming

¹¹³ See IRAFPA, Responsible Site; M. Bergadaà, *Responsable / Accueil*, 2020.

independent, and requirement to carry out tasks unrelated to the thesis; discouragement of any attempt at innovation in the analyses; harassment practices (moral or sexual); recruitment of incompetent doctoral students (to increase research grants); participation in inadequate and/or overly lenient thesis defenses; appropriation or theft of doctoral students' work; failure to support doctoral students confronted with unethical practices.

1.3 Academic integrity program for graduate schools

Higher education institutions must set academic integrity guidelines and take action to address these various problems. Doctoral programs play an important role in this challenge. It would, of course, be impossible and illusory to provide assurance that a doctoral school will never be exposed to a case of plagiarism and scientific fraud. However, the implementation of basic policies and procedures helps to prevent such abuses as much as possible: whether they are committed by the doctoral students themselves, their supervisors, or the supervisory staff, or result from issues external to the institutions. Fortunately, there are signs of growing awareness internationally. The work carried out within Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA), especially at the institutional level, indicates what the guiding principles should be, for example, and what types of mechanisms should be promoted. From this perspective, the implementation of labeling or recognized certification systems provides an opportunity to distinguish which academic institutions have reached the best levels of maturity in this area.

Promoting integrity certification approaches

Public stakeholders encourage teaching and research institutions to adopt certified quality management procedures and to increase exchanges of information among them: more broadly, they aim to establish a framework for the dissemination of good practices. At the

European level, we see the European Network for Quality Insurance (ENQA), created by the European Commission in 1999; at the Francophone level, there is the Agence universitaire de la francophonie (AUF); and at the global level UNESCO is in charge.¹¹⁴ Engwall notes that these movements, along with other pressures to imitate existing measures, are powerful drivers of conformity with uniform practices.¹¹⁵ Professional structures and scientific journals also participate in this drive toward the creation of standards and the sharing of best practices. In the case of business schools, for example, this has led to the European Quality Improvement System (EQUIS), the Association to Advance Collegiate Schools of Business (AACSB), and the Association of Masters of Business Administration (AMBA).¹¹⁶

Beyond integrity issues, the current competition between institutions is to a large extent arbitrated by evaluation and ranking bodies that legitimize reputations and promote certain institutions over others. But regardless of the scientific discipline, there is no label for integrity other than that provided by IRAFPA. However, when it comes to ethics and academic integrity, there is no such thing as ‘cultural relativism’, which would make particular practices acceptable in different countries or disciplines. The principles and approaches put forward must therefore be the same for all academic institutions, regardless of their geographic location or specific field of practice. Nonetheless, a certain pragmatism must be applied when it comes to respecting national and regional policies and sensitivities. Scientific integrity programs must be adapted to the specific reality of the institutions that want to be recognized as

¹¹⁴ <https://enqa.eu/>; <https://www.auf.org/>; <http://www.iiep.unesco.org/en/integrityforum>.

¹¹⁵ L. Engwall, ‘Excellence in Management Education’, in *Excellence in Higher Education*: 82, ed. by E. de Corte (London: Portland Press, 2003), pp. 159-73.

¹¹⁶ <https://www.efmdglobal.org/accreditations/business-schools/equis/equis-governance/>; <https://www.aacsb.edu/>; <https://www.associationofmbas.com/>.

'responsible'. In this context, implementing integrity processes through doctoral schools has several advantages. Certification of doctoral schools is simpler because of its more limited scope and the greater homogeneity of the activities it covers. A working group carrying out the project and the involvement of an integrity program manager will be easier to establish. Of course, because of doctoral programs' integration into and dependence on a larger institution (university, faculty, school, department), implementation may pose difficulties related to the degree of autonomy and the actual capacity to modify internal regulations or more general procedures. However, since doctoral schools occupy a unique place in higher education, they could present a model of integrity and a driving force.

The design of such an integrity program must then target several levels. The first issue is to determine what kind of problems are likely to be encountered in the preparation of a thesis: from the selection of doctoral students to the defense of theses and the professionalization of young researchers. To whom are the rules of the doctoral school addressed and how? What actions should be taken with respect to doctoral students? What actions should be taken regarding thesis supervisors and colleagues in the research units where the theses are completed? A second level involves determining what kind of organization and strategy to adopt according to the specific features (size, discipline, location) of the doctoral school? What responsibilities (or autonomy) should universities assume (or delegate) with respect to their doctoral schools? Finally, the last level of questioning concerns the instrumentation and the definition of the procedures and pedagogical tools to be put in place.

2. Developing a doctoral school integrity charter: the basics

Faced with these questions, our experience as a management researcher and academic supervisor is useful for going beyond the mere assertion of broad principles and thinking concretely about the nature of such a program and the means of making it operational. The purpose of such a program should be not to ensure a minimum quality of results but to accompany the process of learning to do research, by explaining what behaviors and decisions should be taken in given situations: far from a routine performance problem.

The objective of the integrity charter for doctoral schools is to set out the institution's guiding principles in terms of integrity, to indicate the guidelines for good practice in thesis management, supervision, and research training, and finally to provide the broad outlines of the framework for implementing action. This charter is intended for doctoral students, thesis supervisors, and all people contributing, in one way or another, to the supervision of theses (supervisors and colleagues, researchers, documentalists, other doctoral students, and postdocs).

This charter must be precise and explicit: prohibition of fraudulent behavior, absence of plagiarism, authenticity of the work produced, respect of the collaborators and their contributions. Thus, it might include the following elements:

- Definitions of terms and clarification of integrity rules and terms (plagiarism, self-plagiarism, fraud, etc.).
- Actions to prevent plagiarism and scientific fraud and provide information on the topic.
- Policy regarding monitoring, training, or sanction.
- Roles of the various advisory and administrative bodies involved in the handling of complaints, the investigation of alleged misconduct and the sanctions process.

- Investigation procedures in cases of alleged misconduct and the specific arrangements (duration of the investigation, confidentiality, method of compiling files, etc.).
- List of penalties applicable.
- Procedures—at the beginning of each academic year—to inform students and publicize the requirements in the charter.

Since institutions must present a clear, determined policy, the time frame for this implementation should be reasonably short: one to two years.

2.1 Involving governing bodies

To support the credibility and effectiveness of their implementation, integrity policies, charters, and associated action programs require the full commitment and support of the doctoral school's governing bodies. That entails any person occupying a high-level decision-making and representative position at the doctoral school and at the reference entity (university, faculty, department): president, chancellor, rector, dean, laboratory director, chair of the board, or other decision-making body. Their mission is to define the operating procedures of the doctoral school, as well as to certify the validity of the degrees awarded, the relevance of the skills acquired by the doctoral students, and the equity and fairness of the evaluations issued. The governing bodies must commit to setting up an action program that respects a cross-cutting approach covering communication, training, support, and sanctions. They must have the human, economic, and legal tools to investigate cases of alleged integrity violations and to decide on sanctions proportionate to the fraud. This implies allocating a budget and the tools to deal thoroughly with the different courses of action. The governing bodies should also be involved in the public communication of their integrity programs (via the website or any other communication medium of their choice).

In addition, the doctoral school's integrity policy must involve all members of the academic community who contribute, to a greater or lesser extent, to the supervision of doctoral students (research assistants, librarians, professors, other students, etc.). They are committed to communicating and enforcing the integrity charters within the scope of their responsibilities. These commitments should first be expressed in the signature of the integrity charter (or thesis agreement) by each person, and then take more specific forms for the different categories. For instance, there should be an explicit reminder in the forewords of dissertations and doctoral theses that the work is in accordance with the rules adopted by the institution in terms of integrity. An equally categorical commitment (not calling for formal mention in articles) should be made in respect of research and publications by thesis supervisors, researchers, etc.

2.2 Appointing an 'integrity officer'

Within the doctoral school, an 'integrity officer' must be designated and clearly identified, who can also act as mediator or ombudsperson. Of course, the competences of these different roles are distinct, but the size of doctoral schools generally leads to their being entrusted to a single person. Let us specify the necessary conditions for this position.

First, the profile of the person in charge must correspond to the following criteria: seniority in teaching and research, proven experience in supervising theses, cross-disciplinary commitment to the organization (beyond just acting as a researcher), empathy, listening skills and human sensitivity, openness to interdisciplinary approaches, and autonomy.

Then, the person in charge of integrity has to coordinate the overall development of the integrity program within the doctoral school and the supervision of its application and implementation. In particular, this person must have direct access to the heads of the doctoral school and, when such a position exists, to the integrity officer of the institution to which the doctoral school belongs (university or faculty). The integrity

officer must alert them in case of problems and cooperate in the implementation of preventive measures, the defense of doctoral students, or the management of presumed cases of misconduct.

Next, the integrity manager must be able to rely on a team because a change in the habits and processes of an academic institution cannot be imposed top-down or depend only on the will of a dedicated manager. It is therefore essential to have a team with complementary profiles, who are not simply installed because of their positions in the hierarchy. Since academic integrity is a strategic commitment for the doctoral school and its home institution, the team ought to be composed of researchers, thesis supervisors, and representatives of the doctoral students. These people should not be simply anyone who volunteers; they must familiar with the workings of the academic world and its stakeholders.

This team must have several assignments. First, it must define good practices, develop an integrity charter for doctoral students, and ensure that this charter is respected and updated. Then, it must ensure that the doctoral students commit to respecting the charter. Then again, it will coordinate communication and training. Subsequently, it must determine the applicable procedures, in agreement with the players concerned, set the required timetable for their application, ensure their operational implementation, and report to the governing bodies and other stakeholders of the doctoral school. This means keeping an ongoing statistical record of the cases reported and processed. Finally, it is important to suggest improvements to the program, as and when needed, based on the experience with past cases.

2.3 Communicating about scientific integrity

Raising awareness of the issues of integrity and—at the same time—of fraud is an essential step in gaining the understanding, support, and conviction of everyone involved in a doctoral school. Communication is therefore one of the first steps to be implemented in the integrity program. Communicative actions must focus on the various players of

the doctoral school and its environment: potential future doctoral students, researchers likely to serve on thesis juries and to recruit graduates later, etc.

Internally, communication defines the key priority messages. These messages must be adapted to the doctoral school's situation and the problems it may face, while remaining consistent with the institution's overall strategy. This includes organizing discussion forums and events on the topic of plagiarism and academic integrity (conferences, workshops, demonstration of anti-plagiarism software), based on the annual activity reports of the integrity commissions, and contributing to the publication of reports on the issue. This also implies the development of an online information campaign, including the promotion and documentation of good (or bad) practices: creation of an informative website, newsletter, and/or emailing of relevant information to PhD supervisors and researchers on plagiarism by PhD students, representative cases of integrity violations in research or publications, legislation in force concerning copyright and personal data protection, and experience reports from other institutions.

Externally, fighting plagiarism and scientific fraud must be part of the doctoral school's public communication strategy. The doctoral school's reputation and image are decisive in ensuring the quality of the doctoral students it recruits, attracting the best experts to its juries, guaranteeing the excellence of the theses it delivers, and supporting the best placement of its graduates. The doctoral school's website must therefore include a section about its integrity policy and certain information taken from its internal communications, including the charter and links to the relevant pages on the home institution's website.

2.4 Monitoring and controlling regularly

The main integrity problems raised by PhD theses are generally of four types: plagiarism, research fraud, insubstantial theses, or theses by proxy. Their consequences can be dramatic for the doctoral school as

well as for the various parties involved (doctoral student, thesis supervisor, members of the jury), at the interpersonal, interinstitutional, and even international levels, in the case of jointly supervised degrees. The complexity resulting from the diversity of these situations calls for specific treatments.

The real control is, in the first place, the responsibility of the thesis supervisor who must substantiate the quality and authenticity of the texts and work that she receives from her doctoral student. Again, then, it is a matter of making the supervisor responsible upstream. The quality of this control depends on two very different approaches. On the one hand, it is a matter of verifying, on the spot, the relevance of the documents provided by the doctoral students: absence of plagiarism, validity of the data, authentic sources of the material, laboratory notebooks, etc. This control is naturally carried out thanks to the expertise of the supervisor, who can also rely on various tools (anti-plagiarism software or search engines, in particular) that the doctoral school will make available. This control will be deepened, of course, on the final manuscript submitted for the thesis defense. On the other hand, the best way to control the integrity of doctoral students' work remains the quality, frequency, and regularity of their supervision: from the formulation of the research question and the progressive development of the results to the writing. In addition, thesis supervisors, host laboratories, and research teams are responsible for training (see section 2.5) and setting an example. Setting an example means that the members of the doctoral school must contribute to good academic practices in compliance with the integrity charter. In case of doubt about the authenticity of a thesis or the conduct of a doctoral student, thesis supervisors or colleagues have a duty to inform the integrity officer of the doctoral school or the home institution.

While technology has facilitated plagiarism on a large scale, it has also opened up new opportunities for fraud detection. Anti-plagiarism

software is not a quick fix, but it provides preventive support and should be one of the functionalities provided in institutional educational platforms or toolkits. In particular, doctoral schools should systematically subject theses to a similarity detection protocol before the defense, jury deliberations, and graduation take place. It is important to note that the doctoral school's integrity and control policy cannot, under any circumstances, be based solely on these detection tools. Existing software applications have many limitations and are unable to identify certain kinds of fraud: slavish translations of texts from another language, simple reformulations of a plagiarized text, data copied in other formats, reformulation of original thoughts, etc. Software can only support the experience of a thesis director or an expert in the field who is able to identify the origins of certain contributions, spot the absence of certain sources, and detect differences in the style or nature of the writings.

2.5 Training supervisors and students

In the end, the responsibility of thesis supervisors, host laboratories, and, more broadly, the doctoral school is to train doctoral students in good integrity practices. This training is based, on the one hand, on the clarification of the terms and concepts covered by integrity programs and, on the other hand, on actions targeted at students and at thesis supervisors.

The first phase of the training courses must make the definitions of integrity-related concepts clear and promote their appropriation. This work must be carried out according to the specific characteristics, especially disciplinary, of the doctoral school. Hence, depending on the scientific field, the magnitude and prominence of the various fraudulent actions may differ: plagiarism and self-plagiarism, data smoothing, 'salami slicing' of results in order to obtain the greatest possible number of articles (and thus increase the number of citations), and so on. Mastery of the supervision of doctoral students and thesis direction is

often taken for granted as one progresses in an academic career. However, it does not always occur and the policy against plagiarism and scientific fraud must include the organization of training sessions (voluntary or during onboarding) for thesis supervisors and researchers.

Training seminar for supervisors

As far as the training of supervisors is concerned, it can take place on several supports but will always include the same basics. The face-to-face seminars and the appropriation of reference guides on best practices or online resources (FAQs, tutorials, etc.) must include the following elements:

- good practices of integrity in research and educational matters;
- rules of exemplary behavior to be respected and transmitted to students regarding plagiarism, intellectual property, and exam fraud;
- good practices in thesis project management, supervision, and follow-up (managing the relationship with a doctoral student, organizing the work and supervision of the doctoral student, verifying the quality and authenticity of a document, setting up a committee and a thesis jury);
- keeping up to date on emerging uses of the Internet in order to understand the new plagiarism practices used by students and know how to detect these methods.

From the very first discussions with their doctoral students, thesis supervisors must introduce awareness and information on plagiarism and the good practices to be respected, as well as on the institution's academic integrity policy. They must also remind their students of the quality criteria for evaluating a thesis: it is not the number of references or the number of pages submitted that is evaluated, but the knowledge and methods acquired. Ultimately, they must be open to answering their students' questions about plagiarism or fraud.

Doctoral students are often ill-prepared by their previous studies for documentary research and state-of-the-art academic reviews. Sometimes, they have only partial knowledge of referencing and citation etiquette. Often they have relied on the Internet in their earlier classes, mistaking tinkering with copied and pasted texts for an authentic intellectual production. They need to be taught how to conduct a literature search using databases and the Internet, how to cite, how to respect copyright, how to be critical about sources, and how to be ethical about citing documents. The institution must therefore provide mandatory courses on how to review the literature, bibliographic research workshops with library managers, and training in similarity detection software available to doctoral students.

2.6 Dealing with complaints

All stakeholders must be able to easily consider filing a complaint or a request in case of suspected fraud. Consequently, the institution must establish and publish information about whom to contact, the nature of the procedures involved, and the steps to be taken. In order not to discourage allegations of fraud or plagiarism, this information must be clearly described by the doctoral school in the event of a dispute or integrity issue. It is therefore essential to publicize the rules adopted to fight against plagiarism and scientific fraud and explain how they are enforced: how to report a suspected case of plagiarism and scientific fraud and how the investigations will be carried out and sanctions may be decided on.

To this end, the institution must open a privileged and confidential communication channel (email, contact person, etc.) for people who wish to report, in good faith, a suspected case of plagiarism or scientific fraud. All reports of integrity-related issues, regardless of the status of the whistle-blower, will be forwarded to the integrity officer in order to launch an investigation under his responsibility. At the same time, it is important to protect people who report, keeping their identity

confidential as much as possible. The integrity officer will ensure that this examination is conducted with the appropriate degree of confidentiality in order to protect the rights and legal status of the complainant as well as those of the person suspected of plagiarism. In particular, the potential whistle-blower should be protected from retaliation of any kind.

Specifically, four specific conditions must exist in order to proceed:

1. The complaint must be documented and demonstrate harm to an author, person, academic journal, institution, or other party, including the reader.
2. The complainant must provide, in electronic format, a case file containing all the elements supporting the request.
3. The complainant must specify their expectations regarding the outcome of the request.
4. The doctoral school must disclose the possible fraud to the denounced party, in order to give them the opportunity to respond within a reasonable time.

Organizing an investigation

- In case of plagiarism committed by a doctoral student, the person in charge of integrity will appoint an investigation committee. It should include one or two people specializing in the disciplines in question, who are unbiased and free of any risk of collusion with the alleged offender or their thesis supervisor. During the investigation, the doctoral student must be heard by this investigation committee or by a person it appoints. The thesis supervisor can, of course, be heard but must remain outside the investigation procedure. It is important that this investigating committee consist of at least two persons who are independent of any pressure—from the plagiarist, the complainant, the research colleagues, or the responsible authorities. Depending on the seriousness of the alleged case, and especially when the thesis is close to being defended or

has already been delivered, the integrity officer may appoint an investigation committee made up, in whole or in part, of people from outside the institution.

- In the case of plagiarism or scientific fraud committed by the doctoral student's supervisor or a member of the research team, the integrity officer may attempt mediation. If such arbitration is not possible, or if it fails, she must set up an investigation committee composed of at least one specialist in the field concerned and two people who are experts in the problem at issue. If all the members cannot be external to the institution, the committee should, at least, be chaired by someone from outside the academic institution. In all cases, to ensure fairness and protect those involved from any future accusations of conflict of interest, there should be no hierarchical relationship between committee members and any of the parties. It is important that the investigating committee be neutral and free of pressure—whether from the plagiarist, the complainant, other faculty members, or the responsible authorities.

Nonetheless, formal procedures for investigation and sanctions are not the be-all and end-all. The doctoral school also needs to introduce a mediation mechanism. Such a tool is indispensable to encourage the speedy handling of problems or complaints. On the one hand, it simplifies the resolution of disputes in the case of fraud that is manifest and/or acknowledged by its author. On the other hand, when possible, the use of mediation avoids increasing tensions within research teams or between the thesis director and the doctoral candidate. Unlike situations of plagiarism between peers, for example, the asymmetry of the supervisor/doctoral student relationship often makes it difficult to open an investigation. Mediation can be provided by the person in charge of integrity, by an ombudsperson, or, if necessary, by a designated expert.

2.7 Establishing sanctions

The rules of fairness of any juridical process presuppose the separation of the investigating and sanctioning bodies. This is also the case in academic issues. Consequently, once the investigation has been completed, the integrity officer must inform the competent body (doctoral school management, scientific council, president of the home institution) of his conclusions for their information and to trigger possible sanctions. This presupposes that the doctoral school or institution has previously defined a penalty scale in case of integrity violations and the conditions of their enforcement in terms of possible legal consequences. As in any investigation and sanction procedure, all parties must be heard and the possibility of appealing to the governing bodies (presidents, rectors, deans, directors, etc.) must be offered. The appeal must be formulated within a short period of time and its examination must be rapid.

For doctoral students, the scale of applicable sanctions can range from a simple reprimand or reminder of good practices to suspension from the university or, if necessary, the cancellation of the doctoral degree and the prohibition of re-registration. If the fraud is proven, a dedicated council or sanctions committee will have to decide on the measures to be taken. As a suggestion, in case of a minor fault (partial plagiarism, cherry picking of data), the obligation to redo the work concerned (research, surveys, analyses, data collection), the submission of a new version of the work, or the postponement of the thesis deadlines may be decided upon. In case of major fraud (thesis by proxy or major plagiarism), the penalty can go as far as suspension or permanent exclusion from the institution.

In the case of proven misconduct on the part of members of the faculty (including thesis supervisors, professors, or associate members of the research department), one difficulty is that these people have different employment statuses and report to different hierarchical

authorities. Consequently, sanctions must be imposed by the highest authority of the institution concerned. These sanctions have to be defined in relation to the exemplary behavior expected of supervisory and research training staff and the importance of the fraud: they can range from a prohibition against supervising theses to exclusion from any research body or any activity within the institution.

But setting penalties and sanctions should be only one aspect of dealing with fraud. In addition, measures to compensate the victims must be taken. They may consist, for example, in an apology to the victim(s) or in the reimbursement of any expenses incurred by the procedure. In any case, publications by authors convicted of plagiarism or scientific fraud should no longer be accessible for consultation and, in some cases, should be destroyed.

In the event of a breach of integrity and the issuance of a sanction, the institution should make a fair decision on what information should be communicated to stakeholders after all remedies have been taken. Unless there is a valid reason, the anonymity of the persons involved should be preserved in public communications. On the other hand, it is essential that the institution guarantee that no direct or indirect retaliatory measures will be taken against the complainant, the whistleblower, or the witnesses who may be affected by the sanctions.

3. Conclusion

While the guiding principles of academic integrity naturally remain immutable, the doctoral school's charter and integrity program are not tables of the law that are intended to be set in stone. The rapid evolution of teaching and research practices (good and bad), regular innovations in the tools, methods, and technologies used, and the unprecedented nature of the conflicts or frauds that occur in the academic world call for periodic adaptation of the charter and the action programs. This kind of adjustment and updating assumes the transparency of the measures

implemented, including those related to investigations for fraud or proven plagiarism.

Moreover, they require public communication of the results of these actions. This could be done through dedicated internal working groups or external opportunities (seminars, workshops, publications). This sharing and dissemination of information contributes to open debate among the stakeholders of the doctoral school and play a role in a collective evolution of rules and practices. Based on experience and the data collected on integrity issues, the institution should therefore support a virtuous change by embedding a culture of integrity.

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ACCOUNTABILITY THROUGH INTEGRITY: TOWARD A BALANCED EDUCATION

Christoph Stückelberger

Abstract

Academic integrity is based on values and virtues. It requires education not only in knowledge, but in character and ethical bearings. The article shows that there are ethical methodologies to clarify values and virtues, also in cultural, religious and philosophical differences. It shows how conflicts of values can be managed to reach common standards e.g. in a university. It shows integrity as the virtue of virtues and as a universal and institutional reference in all areas of society including the academic world. There is sometimes a price to pay for integrity.*

1. Introduction

We¹¹⁷ are so steeped in the culture around us that we sometimes wonder if the academic corruption that we see in many countries and at

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¹¹⁷ This chapter is based on the author’s book of which he uses some elements. C. Stückelberger, *Globalance: Ethics Handbook for a Balanced World Post-*

the individual level is not inevitable. Our students and employees challenge us: Why is integrity a value to be achieved? How can we decide what is right or wrong? Is empowerment more than just a contemporary mode of emancipation? Aren't value systems culturally, religiously, historically, and economically diverse, which leads to relativism without common ground for global values? All of these questions are justified. Nevertheless, as an ethics professor and after four decades of research on global ethics, in countries as diverse as China and Russia, in sub-Saharan Africa and in Europe, I have always reasoned on the basis of what we have in common in our values and our virtues. In fact, we are first and foremost human beings, born to mothers, exposed to death, thirsty for reliable relationships, loved and loving, passionate about achieving goals and fighting injustice. This article articulates the eternal question of the links between virtues and values. Virtues are benchmarks of individual behavior, while values are also principles shared by groups and institutions. Our values are essential benchmarks for the direction of our lives. They influence our decisions at every level, from small everyday questions about what to eat to the goals of the society to which we belong. My proposition is that values are not isolated notions, but that they are interconnected like the knots of a net. The concept of Globalance, which I develop in the following pages, designates a global balance of values and virtues in their relationality.¹¹⁸

When deciding on their subjects and places of study, students and their parents usually have pragmatic concerns: 'What program will allow me to find a job, to be well paid? Or 'What is the best university? What is its world ranking?' These are natural concerns; however, I think

Covid (Geneva: Globethics.net, 2020). Free download from www.globethics.net/globalance.

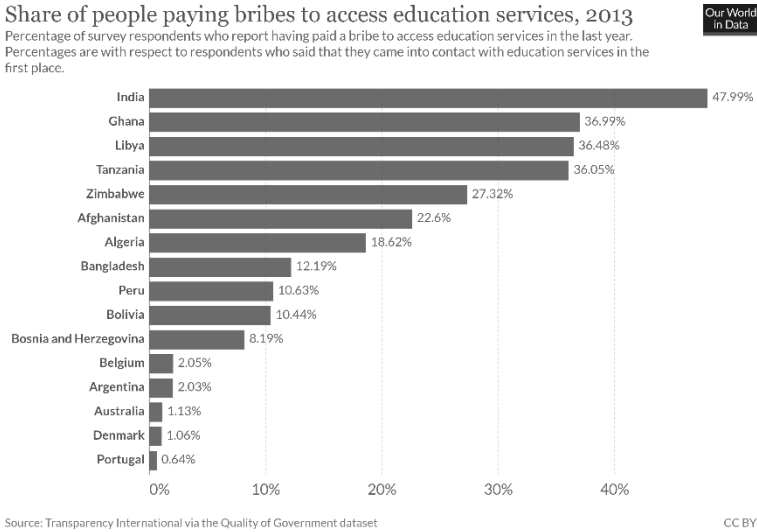
¹¹⁸ See the articles published in The Globethics.net Education Ethics Series: <https://www.globethics.net/education-ethics-series>.

we should also invite students, teachers, and researchers to think about three fundamental questions before applying to a university or accepting a new position: ‘What is my motivation to study?’ ‘Who do I want to be?’ ‘What will people say about me after I die?’ Assuming that the answers are sincere, these questions lead from the outset to a desire for and a commitment to integrity. However, integrity should be a major requirement in the list of priorities of students, teachers, and researchers, along with professional excellence and emotional and social skills. If we are not convinced of this, why did we choose our profession of knowledge brokers?

Sadly, studies and experience show that lack of integrity, corruption, and fraud are also prevalent in higher education. If you need to be convinced, just browse the articles by Gallent Torres and Tello Fons and Peković and others.¹¹⁹ Figure 1 illustrates the extent of bribes paid to access education services at all levels from primary to tertiary education in various countries. We see that the amounts paid are inversely correlated with the level of education. In the Democratic Republic of the Congo, around half of students have to pay such bribes. At the other end of the picture, in Finland, only 0.6% of students report such practices. This is alarming, because integrity is not merely the icing on the cake of education: it is the yeast that enables it to flourish.

¹¹⁹ C. Gallent Torres, and I. Tello Fons, ‘Academic Integrity in Spanish Higher Education: Three Parallel Worlds’, in *The Urgency of Academic Integrity*, ed. by M. Bergadaà and P. Peixoto (Caen: EMS, 2021), pp. 55-68; S. Peković, J. Janinović, and D. Vučković, ‘Academic Integrity at the University of Montenegro: Path Toward Certification’, in *The Urgency of Academic Integrity*, ed. by M. Bergadaà and P. Peixoto (Caen: EMS, 2021), pp. 339-359.

Figure 1: Share of people paying bribes to access education services



2. How can we recognize good and evil?

My purpose is not to debate integrity, but to recall that the values and virtues of a person and of a university are not just an indefinite feeling but are part of a science, like that of the architect who designs a university campus or that of the management concepts that are used to manage an institution.

Animals mainly act on instinct, but humans are free to decide whether to act one way or another. What is the basis for the distinction between good and evil, good and bad, ethics and its opposite? What are the sources and foundations that make it possible to decide what is right or wrong, ethical or unethical, just or unjust? What is the relationship and distinction between a philosophical orientation and a theological (faith-based) orientation? *Five main sources of knowledge have been used by humanity throughout history:*

1. *Revelation (from God, the Absolute, through Holy Writ).* These sources attempt to discover the will and wisdom of God as a direction for human life. Humans seek an absolute point of reference outside of their own existence, recognizing that the human perspective is always very limited.

2. *Reason is the main source of philosophical ethics.* It is not in contradiction with revelation but in a complex relationship with it. It recognizes that humans have a unique reasoning ability, even though reason is as diverse as revelation.

3. *Experience means learning about life and about other people in history.* This is a sort of narrative source of knowledge. It has often been underestimated and not valued enough as a source of knowledge but *de facto* it is one of the main sources of knowledge and unites humanity, because we share many common experiences in our lives.

4. *Community is the source of mutual learning and correction.* Right and wrong in this conception are not a matter of absolute principle but of human relationships and situational interactions.

5. *Divine inspiration comes from revelation through sacred texts but also from direct inner certainty of good and evil through meditation, prayer, spiritual exercises, etc.* Christians call this inspiration by the Holy Spirit, that is, the energy for guidance and decisions, while Buddhists call it the eightfold path to enlightenment—an end to good and evil.

3. Different reasons to act under one golden rule

There are values and norms, which are recognized by all types of worldviews (*Weltanschauungen*), but which are supported by different grounds. One of those norms is the Golden Rule, which is very popular: ‘Don’t do to others what you don’t want to have done to yourself.’ In Jesus’ Sermon on the Mount, it is formulated in positive terms: ‘In everything, do to others what you would have them do to you’ (Matt.

7.12). This Golden Rule can be justified in terms of rational ethics, religion, or utilitarianism.

However, the types of ethical argumentation listed below often result in very different, even contradictory, objectives and decisions. Thus, the Golden Rule will not be accorded great importance by the ethics of power below, the supreme value of which is the preservation of (one's own) power.

These types, very simplified, overlap in many places.

- *Religion*: Good is everything that God has revealed to be good (in different religions by their holy writings, believers, or nature).

- *Rational ethics*: Good is anything that reason recognizes as good, that is, anything that can be understood by means of an argument based on experience and tradition.

- *Utilitarianism*: Good is what produces the greatest benefit for the greatest number of people.

- *Behaviorism*: Good is the behavior normally displayed by the average human being.

- *Eudemonism*: Good is what increases my happiness.

- *The ethics of power*: Good is anything that serves to achieve/retain power.

- *Situational ethics*: Good is whatever is appropriate in an individual situation. There are no eternal core values.

- *The ethics of conviction*: It is not the objective action that is key, but the individual's conviction/motivation/inner intention.

- *The ethics of responsibility*: Good is anything whose consequences are good. Only the real effects and consequences of an action count, not the motivation that gave rise to them.

4. The binding nature of values

It is therefore in action that our differences are marked, in the tension between norms and values. But what are these values and norms? How binding are they?

Ethical values describe the ethical foundations from which individual and collective action takes its bearings and against which it measures its correctness and relevance. Originally, *value* was an economic term (utility value, tradable value, real value, added value). Values are what is worth realizing. The ethics of values are based on widely applicable core beliefs.

Ethical norms are often equated with values but they are actually a translation into action. Thus, norms are a realization of values and application to specific sectors, professions, societies, or other contexts. A norm is often quite close to a measurable quality standard such as the ISO standards.

A *fundamental premise* underlies compliance with these ethical values and norms and this preliminary decision cannot normally be justified on rational grounds; it is an intimate certainty based on experience and which is confessional in nature: 'I want to live', 'I am loved', 'I trust in God'. These beliefs are context-independent and have long-term validity. They are also called criteria, principles, or benchmarks. They are characterized by the fundamental principle but can be understood without it. Freedom, justice, peace, and empowerment are examples of core values.

Situational and contextual values can be described as norms, practical standards, or maxims and must be distinguished from fundamental values. Their binding character is moderate, because they give fundamental values concrete form in relation to individual situations and conditions. For example, in education, empowerment is a fundamental value, in general terms, to enable a person to take charge of their own life. But empowering girls through their access to college

education is a contextual value, or a standard for a school in a specific context.

Discretionary decisions have the least power since no fundamental ethical values come into play, or else the value judgment could go one way or another for sound ethical reasons. Let us go back to the empowerment example: electing a girl as class representative may be an example of empowering girls in a school, but it is not a norm that the class representative must always be a girl.

In short, the more concrete a decision, the less universally binding it is. The more general a value, the more binding it is (e.g. the right to equality of all human beings is a universal value and is binding in the form of a human right).

5. How should we manage conflicts between values?

A dilemma arises when two or more values collide and cannot be applied at the same time and at the same level. Fundamental values and practical norms often clash with each other. This situation reflects different needs, starting points, interests, goals, and possible courses of action. The conflict between ecology and economics is one of the most difficult. In these times of pandemic, the dilemma between protecting the health of the population and maintaining the economy, and therefore income for the population, is a thorny ethical dilemma. What avenues are available to us to establish an ethically responsible solution in situations of conflicting values? Let us briefly take a look at three options:

- *First option: Decide that a fundamental value is absolute.* This is often done by making a fundamental value absolute, which has the effect of triggering corresponding counter-movements, which, in turn, are subject to the danger of a single-value tyranny. For example, solidarity made absolute leads to repressive communism, while freedom made absolute leads to savage capitalism. In the COVID-19 pandemic,

the focus on health first, last, and always led to business closures and economic distress. Taken to extremes, this could lead to an explosion in the number of people infected and dead.

- *Second option: Opt for the relational nature of fundamental values.* The relational nature of core values, that is, the fact that individual core values are interrelated, means that they are not absolute in nature but positioned in relation to others, even their opposites (complementarity). This interrelation allows for interdependent ethical action, which is inspired by value systems. For example, relational freedom leads to freedom in solidarity, and relational solidarity leads to solidarity in freedom. Together, health and income lead to optimal (not maximal) health protection and optimal (not maximal) continuation of economic activities.

- *Third option: Preferential rules and situational value judgments.* Preferential rules attempt to resolve a conflict of values by setting priorities relating to fundamental or practical values. The basic structure is as follows: in situation X, the fundamental value C is privileged over the fundamental values B and A; in situation Y, the fundamental values A and B are both recognized, while the practical value (norm) P1 is preferred over the practical values P2 and P3. Again, let us take the example of the pandemic: in situation A, where the infection rate exceeds a certain level, health is a priority and restaurants must be closed. In situation B, where the infection rate is below a defined level, restaurants can open in order to allow businesses to work, but the reopening must be cautious, as health and the economy are still linked, as Option 2 shows. Another example: there is a conflict of values between ‘prosperity for all’ and ‘ecological sustainability’ in the sense that, for example, an increase in the production of foodstuffs and their trade/global transport can cause ecological damage. Here, a preferential rule might be worded as follows: if the short-term satisfaction of needs can lead to the destruction of basic necessities in the long term, then the

protection of those basic necessities is preferable to the consumption of goods that are not necessary for survival.

6. Values and virtues

People and organizations make decisions based on motivations that stem from various factors such as power, greed, opportunity, emotions, faith, or values and virtues. Values are essential benchmarks for the direction of life. They influence decisions at all levels, from small everyday questions about what to eat to corporate goals. Virtues are individuals' attitudes or behaviors. Through self-control, education, and regular training, an individual can become and remain an ethical person. Honesty, modesty, courage, integrity, etc., are virtues. Justice, freedom, participation, and solidarity are values.¹²⁰

Figure 2: Relations among values.

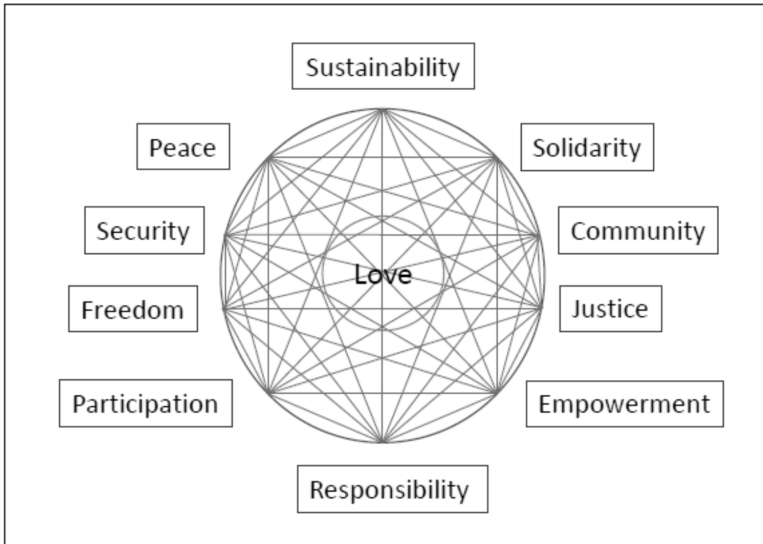
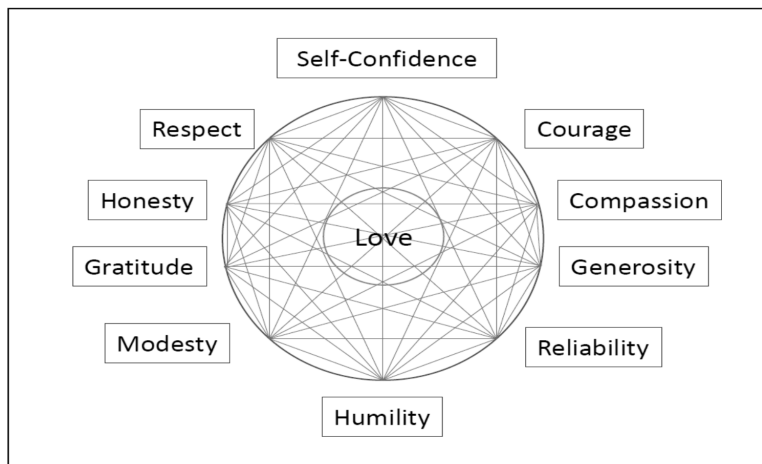


Figure 3: Relations among virtues.

¹²⁰ Figures 2 and 3 are from Stükelberger (pp. 172 and 186).



Interpreting and prioritizing virtues over values can change a person's life, as well as a society or culture. A person can be honest or courageous, but you cannot say that an institution like a university is honest. The institution may have the values of transparency, accountability, and fairness in its charter, which should then lead to honest behavior by teachers and students. Virtues are therefore benchmarks for individual behavior, while values can also be principles for groups and institutions. Figures 2 and 3 show the interrelationships of values and also of virtues.

Values and virtues are often in tension with each other or are seen as contradictory and not complementary.

How then should one deal with contradictions such as the case of a young person who thirsts for more individual freedom but whose parents or village demand community orientation and solidarity first of all? Empowerment is a key value in education. It means enabling people (children, students) to take charge of their lives and live in dignity. Education means empowerment through job-related knowledge and skills, as well as character building. Empowerment can also lead to an elitist attitude by giving students the tools to rise on the backs of others; to become innovative but exploitative entrepreneurs detached from

values; to use their knowledge of the financial sector to develop new derivatives and complex financial instruments until it collapses as in 2007; to use their skills for speculative games like the young banker who caused a multi-billion-dollar loss for a reputable international bank. Empowerment can be misunderstood as the development of the ability to exploit or oppress others. Empowerment must therefore be balanced against integrity, in a balance of values and virtues.

The main ways of dealing with disputes are as follows:

1. *Destruction*: One of the protagonists attempts to destroy the other in order to dominate with absolute power.
2. *Fusion*: Opposites merge, become one and neutralize each other, resulting either in zero or confused energy or in productive energy.
3. *Innovation*: Opposites combine to create something new together, for example a child of a man and a woman.
4. *Synthesis*: Opposites sublimate, absorb each other, integrate, and change dialectically.
5. *Balance*: Opposites are in a relationship and a constant interaction of dynamic balance and therefore of creation and procreation of life as a continuous evolutionary process.

7. Integrity: the virtue of virtues

The person of integrity acts impelled by an intrinsic motivation and not just an extrinsic one. The person of integrity respects and applies laws and regulations. She has the courage to do the right thing even if the crowds around her do not follow suit, the authorities do not applaud, or the financiers fear probity. A person of integrity is able to recognize conflicts of interest and resolve them transparently. She is able to recognize and correct mistakes (her own and those of others) and accept her own limitations and the need to cooperate with others. Integrity is the combination and integration of several virtues: honesty, respect,

responsibility, transparency, impartiality, justice, peace, and love; it means being reliable and free from corruption and remaining steadfast, seeking and leaving power in the service of the best solution and not for personal gain.

7.1 Integrity as a universal benchmark

Integrity is not just a contemporary concept of good governance. Integrity is a value and a virtue as old as humanity, although it is of course contextualized in every culture and period of history. All religions stress the importance of integrity. Let us take just two examples. The human being of integrity is described in all the books of the Bible. Psalm 15.2-5, for example, is impressive: it describes a person of integrity as one who enforces justice, who is honest, who controls his tongue, who refrains from financial fraud and corruption. In the Koran, integrity is again described as the absence of corruption, the fear and respect of God, and the sharing of one's own wealth (Koran 65.2f; 3 104, etc.).

As mentioned above, integrity represents the combination and integration of many virtues: honesty, respect, responsibility, transparency, righteousness, reliability, probity, honorableness, morality, superior spirit, right-mindedness, and respect for God's rules in matters of justice, peace, and love. Integrity is about living up to your own values and beliefs. For Christians, this means acting in accordance with the will of God. Integrity is doing what is right, even when no one is watching, and doing what is necessary and not just what is profitable.¹²¹ An honest person acts out of intrinsic, rather than extrinsic, motivation. An honest person respects and applies laws and regulations. She has the courage to do the right thing without being followed by the crowd, without being praised by the authorities, and without fear of financial

¹²¹ V. Milazzo, 'Thoughts for Success: Do the Right Thing When No One Is Looking', Vickie Milazzo Institute, 24 April 2015.

loss. A person of integrity can distinguish conflicts of interest and resolve them transparently. A person of integrity can recognize their own mistakes and those of others, and correct them, accepting their own limitations and the need to collaborate with others.

Staying true to the truth in a world where evil, cheating, corruption, dishonesty, lies, and exploitation abound is a great challenge for a person of integrity. This is where she needs a lot of courage and resilience. These are times when the honest person finds himself alone, without any support or understanding from others, and often seen as naive or even weak-minded. These are times when he experiences pain and suffering, for violence eclipses nonviolence, just as the horse eclipses the donkey, referring to Jesus' metaphor concerning donkeys (Zechariah 9:9 and Mark 11:1-11). It is at these times that the strength of integrity is tested and faith takes hold, based on the belief that the dishonest person may make short-term gains, but the righteous will benefit in the long run from blessings, as the Bible promises: 'For the upright will live in the land, and the blameless will remain in it' (Proverbs 2.21), 'Blessed are the meek, for they will inherit the earth' (Matt. 5.5), 'Blessed are the pure in heart, for they will see God' (Matt. 5.8). The spiritual inspiration of a truthful person is their faith, hope, and divine promise. Integrity is the sum of several virtues such as honesty, responsibility, and gratitude, among others. Integrity is of great importance as a key virtue in many sectors of society such as politics, economy, culture, education, media, and especially anti-corruption policies. Integrity in the education sector is most critical; education is still regarded, for good reason, as the pillar of values in society and the foundation of a society's future.

7.2 Integrity as a systems approach and institutional culture

Some people may accuse the ethics of virtues of being individualistic, for virtues are above all benchmarks for attitude and action on a personal level. However, integrity is not reserved only for

ethical heroes—that is, for women and men of strong character. Integrity is the attitude of an individual who can transform a culture, in which the majority of the population can adopt the foundations of integrity under all circumstances.

An example of a personality known for his integrity is Nelson Mandela, considered almost a saint and an icon among African and world leaders. We could name many other people of integrity, known and unknown. People with academic integrity related to study, research, publication, teaching, administration, and leadership number in the hundreds of thousands around the world, often unknown. They deserve a monument for ‘academics of integrity’! They should not be saints or perfect people, but examples of courageous and righteous people with values. Conversely, students and academics lacking in integrity must be blamed more strongly in order to bring them back to the path of integrity.

Integrity is a holistic, systematic approach to solving a problem and reducing its defects. Ethics not only call on individuals to return to moral behavior but make them feel condemned for not providing the support necessary to lead a virtuous life. In addition, ethics help to build a thorough-going support structure for individuals. Individual and interpersonal ethics concern direct interactions between human beings. Structural ethics is the indirect interaction of ethics through structures and rules within institutions. Here are a few examples: professional and institutional codes of ethics, research ethics committees in higher education institutions and hospitals, sanctions against plagiarism, religious worship activities, religious and moral education in schools, education within the family, anti-corruption posters at airports, documentaries on public figures or unknown persons whose exemplary behavior can serve as models for others.

7.3 Integrity as a political, economic, and judicial benchmark for nations

In order to uphold integrity and build an institutional culture based on it, we must consolidate the political, economic, and judicial foundations, apply sanction mechanisms against any violation of these values, and create incentives for those who set an example in promoting these values. Integrity can be strengthened through constitutions and laws, which are respected because of appropriate enforcement and control measures. A transparent, trustworthy, equitable, appropriately funded and supported electoral system, under the oversight of an independent electoral committee, can also go a long way in strengthening the implementation of integrity. Integrity requires a strong judiciary, led by independent and uncorrupt judges, and a trustworthy police force, etc. The non-governmental organization Integrity Action defines public integrity as follows: ‘Public or organisational integrity is the set of characteristics that justify trustworthiness and generate trust among stakeholders. Integrity creates the conditions for organisations to intelligently resist corruption and to be more trusted and efficient’. Integrity Action considers integrity to be the alignment of four factors: responsibility, competence, ethics, and control of corruption. Integrity Action has a short formula: $I = a(R + C + E) - c$. It can be read as follows: ‘Integrity equals actions based on responsibility, competence, ethics, and is free from corruption’.¹²²

7.4 The cost of integrity

Integrity is a valuable ‘asset’! Integrity comes at a price and sometimes requires hard sacrifice. Ethics as values-based behavior comes at a price! You cannot be ethical without being willing to pay the price in situations where you have to choose between an advantage (power, money, promotion, etc.) and your values. Perhaps this price is a

¹²² Integrity Action, *About Us* | *Integrity Action. What Is Integrity*, no date.

sacrifice: not obtaining or accepting a position; being discredited by fake news; realizing financial losses or not getting gains; experiencing broken friendships ('I now see that he was not a true friend'); finding yourself isolated or experiencing other forms of sacrifice.

Integrity calls for the courage to uphold one's own values. This courage can be costly. Two examples of people I have met: the first was a senior manager of a public company in Africa. He resigned voluntarily because he was unable to implement values-based integrity. He gave up his position and his privileges, money, and political and economic power, in order to uphold his principles of integrity. By doing so, he strengthened his reputation as a sincere and trustworthy person—a moral quality to which the people of his country aspire. The second is a friend from Asia, who had accepted a promotion to a high-level academic position in an institution, on condition that he could eliminate the corrupt elements there and build a culture of integrity with greater transparency. He said he would resign if he did not get the audit authorities' support for such a transformation. These two examples show that it takes not only the necessary courage but also a material safety net strong enough to avoid falling into insecurity when leaving a job out of ethical conviction!

However, integrity also has a huge advantage: reputation. This question concerns the legacy we want to leave behind, not in terms of celebrity or cheap applause, but a legacy of credibility and integrity. What do you want people to say about you and your works after you die? 'He was a person of outstanding qualities'; 'She was a woman of great faith'; 'He was a person I couldn't trust'; 'She was a double-dealer'; 'He was a man of great integrity'. A reputation for integrity is a person's greatest asset. Conclusion: we need Values-Driven Education. But today, integrity also generates the power of a good reputation. If your name is respected, you do not even have to wonder how to convince others. This is really a kind of charisma.

8. Conclusion

Empowerment with integrity means serving a cause, that of education based on values and virtues. A values-based education means education in global human values across cultures; respect for the diversity of values within and between cultures; the ability to handle opposites as a contribution to progress and peace; holistic education with integrated and networked thinking; excellence not only in knowledge but also in character; integrity in behavior and personal, professional, and public life; balance between values and virtues as described above; skills to ensure employability balanced with skills to become truly human; compassion for performance combined with justice and equality; loyalty to one's own tradition combined with openness to the world. All that is what the power of one word—integrity—allows.

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THE ROLE OF PUBLISHING IN A CHANGING WORLD

INTRODUCTION

*Pierre J. Hoffmeyer**

‘Publish or perish’ remains the leitmotiv of scientists and academics and this concern is not new. Indeed, the aphorism was formulated as early as 1928 by Case or perhaps in 1932 by Coolidge, depending on the source.¹²³ This demonstrates the perpetuation of a problem that has always been at the heart of teaching and research careers. What is new is the advent, since the beginning of the twenty-first century, of almost instantaneous means of communication and the availability, practically at any time and in any place, of all knowledge published or posted online. This new way of working changes the structure of the relationship between authors and their publishers, whether in traditional or digital mode. On a practical level, everything has evolved. Before the digital era, making corrections to a text, adding or deleting references, or

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¹²³ C. M. Case, ‘Scholarship in Sociology’, *Sociology and Social Research*, 12 (1928), 323-40; H. J. Coolidge and R. H. L. Coolidge, *Archibald Cary Coolidge: Life and Letters* (Boston: Houghton Mifflin Company, 1932), p. 308.

redoing a graphic or an illustration was very time-consuming. Correspondence between an author and his editor was laborious and relied on the typewriter and the post office. Today, all these changes can be made within an hour and the corrected and scanned paper can be returned within a day.

However, in spite of technological progress, the human element remains. A researcher's recognition continues to be defined by her published output, more in quantitative than in qualitative terms. In fact, scientometrics, facilitated by the computing power of information technology, reigns supreme in determining scientists' activities, and even their careers. To further blur the landscape, predatory journals and their deceptive promises abound and try to seduce novices. Plagiarism and self-plagiarism plague the publishing world. This imperative to publish creates, *de facto*, an intimate relationship—healthy or unhealthy, but nonetheless close—between the actors and stakeholders constituting the scientific and academic publishing community. Motivations and interests do not necessarily coincide, and can even be diametrically opposed: reputation for the author and revenue for the publisher. For an author, the management of intellectual property can be an obstacle, as some publishers take possession of it. The technique of anonymous or open review may attract or repel some scientists. The order of the authors' names on an article can generate conflict within teams. Open Access and immediate dissemination can be expensive (Article Processing Charge or APC) and is not accessible to all. Paper publication poses the problem of delays between creation and communication with the reader.

It is true that scientific production has increased exponentially since the 1960s and has been accelerated by the arrival of digital technology. However, the number of major journals, those that count for an

academic career, has not increased at the same rate.¹²⁴ Opportunities to publish an article in these journals are rare and, without the support of already established authors, the task can be impossible. In the case of these large journals, the pressure also sometimes leads to editorial disasters where authors of the same article divide up the tasks while ignoring what the other ones are doing. To take just one example, consider the study on the use of hydroxychloroquine in COVID, published in *The Lancet* and then retracted a few days later. Why? Because the idea was to publish even faster than usual, so the team's statisticians were unaware of the inadequacies, as well as the origin, of the database provided by their colleagues.¹²⁵

It is this world of academic publication, for which no formal education prepares him, that the researcher must explore and master. Thanks to this book, and more specifically the following chapters, he will find the keys to solve the complications related to academic and scientific publishing as well as innovative ideas to accompany him in this maze.

Jacques Py, Editor-in-Chief of the *European Review of Applied Psychology*, is well placed to introduce the concept of deontology, or the respect of good practices. He also insists on the differences between morals and ethics. One imposes itself on the individual's conscience while the other indicates the course of action to be followed according to the social standards in force. This is followed by a rigorous dissection of the scientific publication system, which Py judges to be on the verge of implosion. The reasons for this impending disaster range from the dictatorship of results to the dilution of scientists' responsibilities and

¹²⁴ M. Fire and C. Guestrin, 'Over-Optimization of Academic Publishing Metrics: Observing Goodhart's Law in Action', *GigaScience*, 8 (2019), Article giz053.

¹²⁵ M. R. Mehra and others, 'Hydroxychloroquine or Chloroquine with or without a Macrolide for Treatment of COVID-19: A Multinational Registry Analysis', *The Lancet*, 395(10240) (2020), Article 1820.

the lack of reviewers. He also explores the proliferation and perverse effect of self-plagiarism, an unexpected consequence of multi-author publications. Bibliometrics as a criterion for evaluating candidates for academic positions is questioned and must be replaced by a qualitative approach to activity and by quality supervision. Py questions the value of the numerous codes of conduct and integrity, which only become effective when the scientific and academic community for which they are intended adheres to them. Along with this author, we feel like saying, 'Let's talk about science!'

Hervé Maisonneuve, initiator and editor of several blogs dedicated to integrity in medicine, including *Rédaction Médicale*, talks about a crisis situation: COVID, of course, but also the current scientific publishing crisis. His article paints an incomparable picture analyzing the effects of the pandemic-driven lockdown on publications. Submissions have doubled or even tripled in a very short period of time, in spite of a chronic scarcity of reviewers. He concludes that the observed practices show that neither the principles of open science nor the Singapore declarations on integrity have any impact on researchers' individual behavior. And yet, despite its shortcomings, peer review remains the only alternative. The author insists on the FAIR principles (Findability, Accessibility, Interoperability, Reuse of digital assets) as a guarantee of good publishing practices.

Dominique Leglu is a science journalist with an eye on the academic world. Because the journals she edits—*La Recherche* and *Sciences et Avenir*—are the link between so-called 'fundamental' researchers and a knowledgeable public, she adopts an uncompromising stance in the face of delinquency and negligence in matters of integrity. By tracing the history of the awareness of scientific fraud and plagiarism, she insists on the indispensable bond of trust between journalists and scientists. As a privileged witness, she tells us about the proliferation of cases in the world of publishing that the Internet is about to make unmanageable.

The difficulties encountered by institutions in recognizing and responding to plagiarism, self-plagiarism, and fraud are highlighted. Calling on the ethics of journalism itself, she concludes by invoking the imperative of respect for readers.

Chérifa Boukacem-Zeghmouri, a specialist in information and communication sciences, writes about new forms of production, dissemination, and legitimation of scientific research. She questions the irruption of social media in the universe of scientific publication, shaking up the ethics of processes and the validity of the science produced. These academic social media are now an integral part of the universe of scientific publication. The establishment of an observatory of practices is encouraged. The creation of collaborative platforms and academic social media is changing the game. Having grasped the nature of the needs of research communities, these media producers have been able to respond with digital platforms equipped with sharing and interaction functionalities that they have presented as a contribution to the Open Access movement. The author considers the question of what will happen to the content in future given the limited lifespan of these platforms.

Jean-Philippe Denis is both the editor of a traditional magazine and the manager of a web-TV channel that gives a voice to researchers. In concluding this section on publishing, he makes remarks that call for reflection, but also for action. Drawing a parallel with economic capitalism, he tells us that, in this game, fraud becomes inevitable. Are traditional magazines destined to disappear? Certainly, in the game of constant expansion, there are more and more producers of articles and fewer and fewer reviewers. To solve the problem of the shortage of reviewers, he proposes radical remedies: the end of anonymity, compensation, and accountability. There is also a need to counter the wave of predatory journals that promise fast publication for naive authors... Denis also points out the dangers of Open Science, which also

operates according to the economic model of the most powerful, such as ‘preprint’ ultimately falling into the hands of Elsevier. In his view, conferences have become job markets that must disappear and be replaced by constructive, peaceful debates between scientists. Finally, he speaks with passion about a completely different model of media publishing, as he hosts interviews and has made more than 800 broadcasts to date. What if the future of scientific communication was unfolding right now?

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DEONTOLOGY AND THE SCIENTIFIC PUBLICATION PROCESS

Jacques Py

Abstract

After laying down a few markers aimed at distinguishing between what comes under research ethics (which concerns the participant in the research and even society) and what comes under scientific integrity (i.e. the researcher's deontology), an argument is developed concerning the implosion of the peer review process. The argument is made about the implosion of the peer review process, which is a pillar of the functioning of science, as well as about the minor deviations of authors in plagiarism and self-plagiarism, which are indeed a problem of scientific integrity, albeit of moderate importance, but of great significance. An analysis is made of the structural reasons for these various problems; solutions are proposed around the idea of a radical rebalancing in the evaluation of researchers between their scientific production activities and their activities in evaluating the articles and research projects of their peers.*

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1. Introduction

Following the publication of the Corvol Report (June 2016) on scientific integrity, a national network of Scientific Integrity Officers was established in France. The author of this chapter was among the first to be appointed.¹²⁶ Approximately one hundred universities and higher education and research institutions have now appointed scientific integrity officers. They are appointed by the university chancellors, to whom they refer, and their responsibilities are extremely varied. In some universities, their scope also includes ethical issues, but that remains an exception. There are overlaps between deontology and ethics, but for didactical reasons we believe that it is important to distinguish between the two terms.

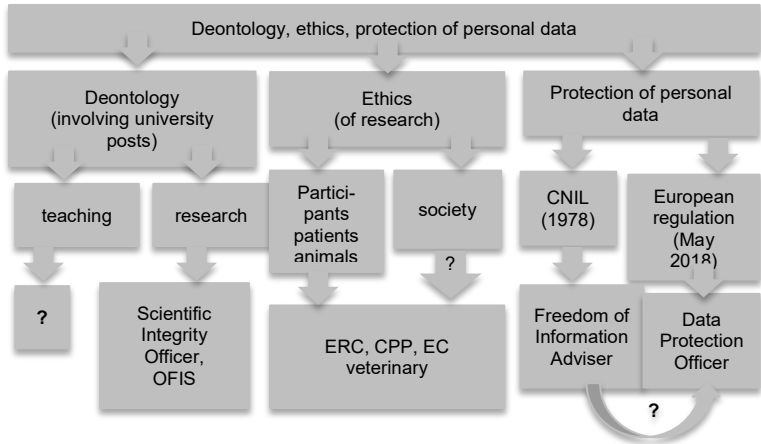
Deontology means following good practices in order to guarantee the reliability of the data obtained and the reproducibility of the research and ensure that every effort was made to avoid plagiarism. *Ethics* involve research participants, and even society as a whole. Ethics mean, for instance, respecting the confidential nature of data (which falls under a more general principle of loyalty toward research participants). The third aspect of integrity is the protection of personal data. This has more to do with regulations than ethics, even though such regulations can help solve ethical issues. Morales describes the dilemmas that arise in this regard when viewed from a legal perspective.¹²⁷ Confidentiality does not mean anonymity. From the moment a participant has given his informed consent for a researcher to store personal information, there are no longer any ethical problems, but there is an issue regarding the

¹²⁶ P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d'État chargé de l'Enseignement supérieur et de la Recherche*, 29 June 2016.

¹²⁷ S. Morales, 'Propriété, accès et partage des données : Qu'en dit le droit québécois ?', in *L'urgence de l'intégrité académique*, ed. by M. Bergadaà and P. Peixoto (Caen: Editions EMS, 2021), pp. 257-72.

protection of personal data. Figure 1 presents a general view of the issues concerning deontology, ethics, and the protection of personal data.

Figure 1: The scope of scientific integrity¹²⁸



In this article, we will deal with the deontological tensions that arise at the very heart of research: the system of scientific publications.

Deontology is seen as a movement or action associated with the performance of professional duties. Bergadaà writes that, although individual conscience is bound by morality, ethics drive individuals to act in one way or another within the framework of action to which they refer; deontology stems from the conflicts between different duties that emerge when one performs one's job.¹²⁹ Etymologically, *deontology* comes from the Greek words *deon* and *logos*, which respectively mean 'duty' and 'discourse'. Today, it is defined by the Larousse dictionary of

¹²⁸ Abbreviations used in Figure 1: CNIL: French data protection authority; OFIS: French office for research integrity; ERC: European Research Council; CPP: Code of criminal procedure; EC: ethics committee.

¹²⁹ M. Bergadaà, 'Évolution de l'épistémè économique et sociale : Proposition d'un cadre de morale, de déontologie, d'éthique et de responsabilité pour le marketer', *Recherche et Applications en Marketing (French Edition)*, 19(1) (2004), 55-72.

French as ‘the set of rules and duties that govern a profession, the conduct of those who practice it, and their relationship with their clients or the public’.

2. The dynamics of responsibility for scientific journals

The question of deontology in research is nothing new. It has its roots in both the good practices governing experimental methodology, as defined in particular by Claude Bernard, and some of the major cases of scientific fraud that have marked the ‘short’ history of science. This question is nothing new, but it recently became particularly acute when the scientific community became aware of the thorny issue of the reproducibility of experimental results. There is a very significant number of articles for which the data cannot be reproduced. This affects some disciplines more than others, such as medicine or psychology.¹³⁰ According to Corvol, the reason for this non-reproducibility concerns all the key players in research: the researchers themselves, the institutions that employ them, the evaluation committees, the scientific journals, and the organizations that fund research.¹³¹ The Diederik Stapel affair, which came to light in 2011, is undoubtedly an exception to this.¹³²

The responsibility of scientific journals for deontological misconduct is not negligible. A particular concern is their excessive thirst for surprising and sometimes counterintuitive results, for which a high impact is expected in terms of citations, on which the evaluation of a journal’s quality depends. The criteria for selecting articles partly

¹³⁰ Open Science Collaboration (OSC), ‘Estimating the Reproducibility of Psychological Science’, *Science*, 349(6251) (2015), Article aac4716; M. Baker, ‘Over Half of Psychology Studies Fail Reproducibility Test’, *Nature*, (2015), Article 18248.

¹³¹ Corvol, *Bilan et propositions*.

¹³² P. Barthélémy, ‘Le scandale Stapel, ou comment un homme seul a dupé le système scientifique’, *Le Monde.fr*, 9 December 2012.

explain the non-reproducibility of the published results. The ‘newness’ factor of a scientific result is an integral part of what is considered a scientific contribution, whereas an article seeking to reproduce the results of already published research is not considered ‘new’. Moreover, research that does not result in the validation of a hypothesis is less valuable in the eyes of a journal’s editorial staff than research that provides the expected results. Therefore, research seeking only to replicate published results and failing to do so would be of very little interest.

However, over the last few years, some journals have developed ‘open science’ strategies, which may be helping to correct the biases in reviewing articles. It is possible to submit a research protocol to certain journals which, after carrying out their review, will agree to publish the research whatever its final results. Including a ‘reproduction’ section in all scientific journals could help to ensure the reproducibility of published results.

Rowland lists four duties of scientific journals: spreading knowledge, archiving canonical knowledge, controlling the quality of publications, and giving authors the credit they deserve.¹³³ Regarding this last point, the widespread pressure to publish in order to access university or research positions creates bias. Bias affects all types of evaluations, whether they concern sales assistants, police officers, teachers, researchers, etc. Let us take the example of the police. A dozen years ago, in France, a certain Minister of the Interior wished to evaluate police services based on the number of people taken into custody. In a single year, there were over a million arrests! For a country of 67 million inhabitants, that number was highly improbable, especially when one considers that women, children, and elderly people were hardly ever arrested. All evaluations generate their own biases, especially when

¹³³ F. Rowland, ‘The Peer-Review Process’, *Learned Publishing*, 15(4) (2002), 247-58.

there is only one criterion for measuring performance, and there's the rub.¹³⁴

3. The structural causes of the peer review system's implosion

In an ideal peer review system, everybody would have the time to write high-quality articles, and readers would have both the time and the required attention to review them and recommend them for publication or rejection. This system is the traditional model for reviewing scientific output.¹³⁵ It is an integral part of the philosophy of science and epistemology.¹³⁶ This model is admittedly criticized, as the review of an article depends greatly on the choice of reviewers, who are very sensitive to orthodoxy and to belonging to networks, but nobody has yet found a viable alternative (to paraphrase Winston Churchill, the peer review system is the worst system for the review of scientific output—except for all the others).¹³⁷ Furthermore, the peer review system can be improved, as most of its biases and limitations can be amended. Scott offers solutions to optimize the reviewing of articles, in particular by

¹³⁴ D. L. Kirkpatrick, 'The Four Levels of Evaluation' in *Evaluating Corporate Training: Models and Issues*, ed. by S. M. Brown and C. J. Seidner (Dordrecht: Springer Netherlands, 1998), pp. 95-112; J. Py, 'Questionnements sur l'activité évaluative à l'école', in *Les apports de la psychologie sociale à la problématique de l'évaluation: Quelques acquis et éléments de réflexion*, ed. by G. Figari and M. Achouche (Brussels: De Boeck Supérieur, 2001), pp. 181-88.

¹³⁵ R. Spier, 'The History of the Peer-Review Process', *Trends in Biotechnology*, 20(8) (2002), 357-58.

¹³⁶ J.-L. Beauvois, and P. Pansu, 'A good idea gone bad in the service of cultural globalization: measuring the impact of publications in the psychological disciplines', in *Globalization – Today, Tomorrow*, ed. by Kent G. Deng (IntechOpen, 2010), pp. 77-89.

¹³⁷ F. Ferretti and Â. G. Pereira, 'A New Ethos for Science? Exploring Emerging DIY Science "Qualities"', *Futures*, 125 (2021), Article 102653.

ensuring that the experts called upon are diverse, especially geographically, and also by seeking a balance between originality and tradition.¹³⁸ Again, these problems clearly fall under the scope of everyday deontological debates: guaranteeing a system's equity and accuracy.

However, such adjustments are insufficient, as over the last few years one aspect of the peer review system has been under great strain: the pressure exerted on researchers by the various reforms in higher education and research around the world, which encourage researchers to publish even more articles but not to review more of their peers' work. Over the same period, the workload for researchers has increased, especially due to the development of funding for research projects. The editors-in-chief of scientific journals therefore have fewer than ever available reviewers, even among those who have already published articles in their journals.

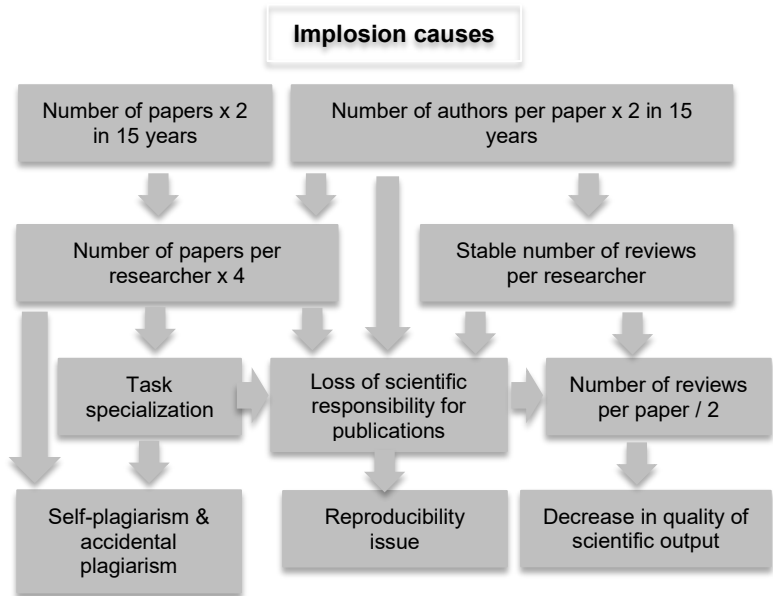
The year 2020 was significant in this respect. For instance, in the case of the *European Review of Applied Psychology* (ERAP), the scientific journal for which the author of this chapter has served as editor-in-chief since 2007, we can see that, between 2010 and 2019, we received approximately one hundred papers each year (between 82 and 117 depending on the year, for a precise mean of 102). In 2020, ERAP received 166 papers, representing a 63% increase in the papers submitted compared to the mean for the previous ten years. Furthermore, ten years ago, we were usually able to obtain three independent reviews per paper. Today, we struggle to obtain two, and in many cases we are obliged to provide an editorial response based on a single expert assessment. Consequently, it is the editor-in-chief or the associate editor in charge of the paper who is forced to carry out a more thorough reading of the article, combining both an expert and an

¹³⁸ A. Scott, 'Peer Review and the Relevance of Science', *Futures*, 39(7) (2007), 827-45.

editorial role. The dilemma is therefore whether to rely on a single expert's analysis or to become personally involved in the process, leading to excessive consumption of time and energy, and even to a substantial change in the nature of editorial work. All the editors-in-chief of scientific journals to whom we spoke about this phenomenon confirmed that they were facing the exact same situation. Some have thrown in the towel. When there are no longer any reviewers, or associate editors, or editors-in-chief, there will be no more scientific journals, and authors will be condemned to self-publication on their own websites... It is doubtful that science has anything to gain from this situation.

The peer review system, therefore, is currently imploding. Researchers' professional activity is in urgent need of rebalancing. Ideally, there should be a more equal balance between the importance attached to scientific output and that attached to peer reviewing. It is therefore absolutely necessary to change the parameters of the evaluation of researchers by promoting not only their work as authors but also their work as reviewers of scientific papers and research projects. The job of editor-in-chief or associate editor, which has become more and more demanding due to the implosion of the peer review system, must also be promoted in a way that is commensurate to the work performed and the challenges faced.

Figure 2: Causes of the implosion of the peer review system.



A number of ideas are currently circulating, but what about the founding principles of our profession? One solution would be to compensate academics for reviews and the editing of scientific journals. This step has already been taken by some research funding bodies and research and higher education evaluation agencies, such as the HCERES¹³⁹ for expert assessments, and even by some scientific journals for editorial tasks; for example, *Cognition* compensates members of its editorial committee. This would be a revolution in the business model of scientific journals, which would make authors bear this additional cost—for the most part: since researchers do not review enough of their peers' papers, they will have to pay (more) to get published. We return

¹³⁹ The French High Council for the Evaluation of Research and Higher Education.

to the question of the balance between producing research and scientific reviewing.

4. Keeping it in the family

Deontology does not imply morality. Doctors are required to treat patients and save lives but not to be honest, especially in their private lives. Similarly, researchers know they will be evaluated based on the number of scientific papers they publish and the impact factor of the journals in which they are published, not on their moral duty to participate in the epistemology of science and its overall functioning rather than only part of its functioning. Numerous biases can therefore be found, which are liable to cause problems of scientific integrity.

The excessive zeal to publish is based on Taylorism, in particular on the idea that productivity increases thanks not to a scientific division of work but to a division of scientific work, including the writing of articles. The number of authors who have co-written papers has increased by 36% in a dozen years (+149% in France, a factor of 2.5), as is shown in Table 1. Some have specialized in the processing of statistical data, others in discussing results, and still others in reviewing the question, etc. Scientific responsibility is being diluted, to the point where, in some famous cases of scientific fraud—such as the Stapel case—top researchers had unknowingly collaborated for years with a scientific swindler who had invented false data. Is it reasonable to put all the blame on the swindler?

This excessive zeal is also made evident by the industrial nature of scientific writing. The heavily structured format of a scientific paper lends itself to this. From one paper to the next, a large part of the introduction will be reused, as will the section concerning the method or discussions.

Such self-plagiarism constitutes a problem of scientific integrity as it places stereotypical constraints on science, whereas it

would be more expected of a researcher that she should conceptualize and rethink science in her writing instead of copying previous work. The practice of ‘salami slicing’, which consists in dividing research into several segments in order to publish several papers is also part of a similar phenomenon, leading inevitably to large overlaps between the various papers stemming from the same research. Moreover, by liberally increasing their number of publications, the authors who engage in these dubious practices inflate their CVs and enjoy a better reputation than their more scrupulous colleagues.

Table 1: Mean number of authors per paper, by discipline, in 2000–2004 and 2012–2016 (source: HCERES, 2019).

	World		USA		China	
Discipline	2000-04	2012-16	2000-04	2012-16	2000-04	2012-16
Physics	4.5	7.6	6.5	19.5	7.9	17.9
Particle physics	7.9	37.1	16.6	125.8	25.7	272.2
General physics	5.9	10.2	15.1	39.0	13.9	29.3
Nuclear physics	5.7	13.7	8.3	41.0	8.5	47.2
Earth sciences, Astron., Astrophysics	3.5	5.8	3.8	10.1	4.3	10.4
Medical research	4.6	5.8	4.4	5.8	5.1	6.9
Fundament. biology	4.4	5.7	4.3	5.8	5.0	7.0
Applied biology- Ecology	3.4	4.6	3.4	4.6	4.1	5.9

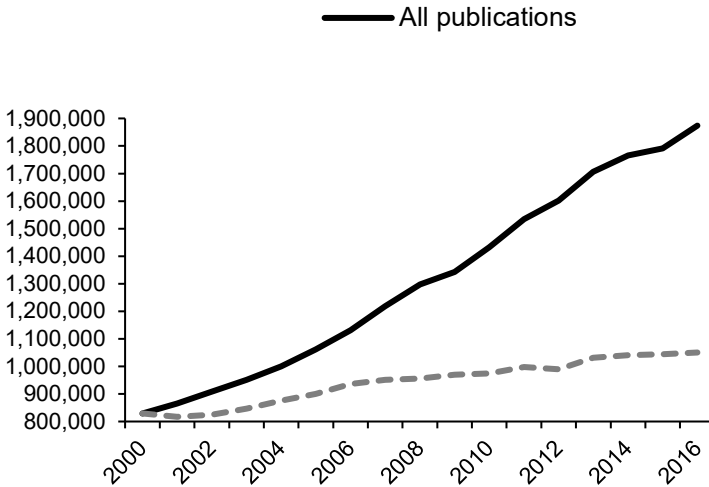
Discipline	World		USA		China	
	2000-04	2012-16	2000-04	2012-16	2000-04	2012-16
Chemicals	3.8	4.7	3.6	4.8	4.3	5.1
Engineering	3.2	3.8	3.2	3.9	3.6	4.1
Social sciences	2.3	3.1	2.2	3.2	2.9	3.1
Computer science	2.7	3.4	2.7	3.6	3.0	3.7
Humanities	2.0	2.5	1.9	2.6	2.6	3.7
Mathematics	2.0	2.4	2.1	2.5	2.1	2.7
All disciplines	3.3	4.5	3.5	6.0	4.1	6.4

Discipline	France		Russia		UK	
	2000-04	2012-16	2000-04	2012-16	2000-04	2012-16
Physics	10.0	52.6	10.8	54.7	11.3	55.1
Particle physics	31.1	358.1	29.4	324.2	38.2	287.6
General physics	21.9	92.0	23.7	76.7	26.9	93.8
Nuclear physics	12.6	93.2	11.1	76.0	13.7	103.3
Earth sciences, Astron., Astrophysics	5.0	23.7	4.1	38.0	4.3	19.3
Medical research	5.7	8.2	4.8	7.2	4.2	6.3
Fundament. biology	5.6	7.9	4.5	6.3	4.6	6.9
Applied biology- Ecology	4.3	6.4	3.1	4.5	3.6	5.6
Chemicals	4.5	5.8	4.0	4.7	3.9	5.3
Engineering	4.3	4.9	4.5	4.3	3.3	4.2
Social sciences	3.3	4.3	2.3	3.0	2.1	3.2
Computer science	2.9	3.9	2.4	3.0	2.7	3.8
Humanities	2.2	3.1	2.3	2.6	1.8	2.5
Mathematics	2.0	2.5	1.8	2.0	2.2	2.6
All disciplines	4.5	11.2	4.1	11.8	4.0	10.4

And what can be said of the practice consisting in sending the same article to several scientific journals at once in order to maximize the chance of getting published in the shortest possible time? Again, research deontology is being jeopardized by this type of ‘minor scientific delinquency’. The irony of the matter is that, on certain specialized subjects, editors-in-chief use the same strategies to find experts, with the inevitable consequence that a given expert often has to read the same paper for two different journals. The inconsiderate authors will have given extra work to two editorial teams, already under considerable pressure, only to then see their paper rejected by both journals.

This combination of the tendency toward self-plagiarism and the increase in the number of published articles leads to inextricable situations with regard to scientific responsibility. Let us imagine an article co-written by four authors, where each author may feel responsible for what was published; if, in articles written alone or with new co-authors, each author reuses a large part of the introduction or the method or discussion section, there will then be five essentially identical articles. And if the new co-authors do the same thing, that will lead to around twenty articles with mostly similar content... and all this, without the authors ever thinking that they have plagiarized anyone, since they have merely plagiarized themselves. It is likely that this phenomenon has contributed to the huge increase in the number of published articles, since this number has more than doubled over the last twenty years, as shown in Figure 3.

Figure 3: Number of scientific publications worldwide between 2000 and 2016 (source: HCERES, 2019).



An editor-in-chief's feedback

In 2020, as editor-in-chief of the *European Review of Applied Psychology* (ERAP), I had to handle thirty-two problematic cases of plagiarism. This amounted to 19% of the articles submitted to the journal that year.

Since 2015, this kind of analysis has been made possible, because Elsevier, the journal's publisher, set up overlap detection software for scientific literature around the world by providing a high level of security to editors. Before then, a few plagiarism cases were detected by reviewers and some by editors, but often in retrospect, after publication. By using this software (*iThenticate*), the editor-in-chief can obtain an overlap report showing a percentage of estimated borrowings in a couple of seconds.

This percentage does not have any intrinsic significance, as the overlaps still have to be analyzed in detail. The software cannot distinguish between citations with or without quotation marks. Some

identical wordings may have been produced independently. However, when overlaps account for more than one-fifth of an article, that usually (but not always) means there is a case of plagiarism. In 2020, fifteen articles contained textual plagiarism. In five of these cases, the borrowings were significant enough to justify an immediate rejection.

Sixteen other articles were cases of self-plagiarism. One of them was a case of total self-plagiarism as it had already been published in another language. It was detected thanks to an abstract in English (unfortunately, the software cannot detect translations from one language to another). This article was naturally rejected at once. In most cases (precisely 80%), the overlap issues seemed moderate; they ranged from citations without quotation marks to a few paragraphs which were virtually ‘copy-pasted’. With a higher tolerance for self-plagiarism than for plagiarism, the editorial team decided to ask for corrections in the event of a revision (no article is accepted without being revised); approximately 40% of the articles received are revised. With this in mind, the overlap report is sent to the authors to help them modify their draft.

Before we discuss solutions, it should be noted that French-speakers have three different words (*morale*, *déontologie*, and *éthique*) to designate what English-speakers call *ethics*. This does not simplify matters. When considering the list of good and bad publication practices (related to the authors’ deontology), we can find them specified for instance by the *Committee on Publication Ethics* (COPE). Since 1997, this organization has brought together a growing number of scientific journals in order to define good practice in terms of scientific publication. As early as 1999, COPE drafted a list of possible responses to the instances of misconduct faced by the editors-in-chief of journals.¹⁴⁰

¹⁴⁰ Committee on Publication Ethics (COPE), ‘Guidelines on Good Publication Practice,’ *The COPE Report 1999* (Eastleigh, UK: COPE, 1999), pp. 43-47.

These answers suggested by the COPE are classified approximately by level of severity:

- Sending an explanatory pedagogical letter to the authors stating the evidence of their obvious failure to comprehend deontological principles.
- Sending a letter reprimanding the authors for misconduct detected and warning them against future misconduct.
- Sending an official letter to the heads of the relevant institution or funding body.
- Publishing a notice of redundant publications or publications containing plagiarism.
- Drafting an editorial providing all the details of the misconduct.
- Refusing to accept future submissions from the offending researcher, or even from his research unit or his institution, for a given period.
- Officially withdrawing the article from scientific literature and providing information to other publishers and indexing bodies.
- Reporting the case to an authority or organization with the power to investigate and set up an appropriate procedure.

A survey of the editors-in-chief of scientific journals would provide information on the application of these recommendations and their consequences. One thing for certain is that, without a centralized body, sanctions will always be limited to the editor-in-chief's personal judgment and will have no dissuasive effect on doubtful practices.

5. Passing on knowledge and appropriating ideas

Detecting textual plagiarism is an easy matter, as it is done automatically by software available to the editors-in-chief of journals published by major scientific publishers. It is therefore possible to proceed against an author of textual plagiarism by referring to ethical norms known to all. However, it is much more difficult to take action

against the plagiarism of ideas.¹⁴¹ In deontological terms, however, this is the most serious form of plagiarism. It is a great deal more harmful to see a peer appropriate one's idea than to have her copy a paragraph. The plagiarism of ideas is also the most difficult to identify, including by the authors of the plagiarism themselves. Jean-Paul Codol, a leading French researcher in social psychology, writes in a preliminary note to his doctoral dissertation (that he once sent one of his own articles to a celebrated foreign colleague who he thought would be interested in the subject.¹⁴² In reply, he received a scathing letter accusing him of several borrowings without citing the source. After checking, Codol had to acknowledge that the accusation was completely justified. A few years previously, he had read an unpublished version of his colleague's article. He writes: 'It had caught my attention so strongly that my mind registered it more or less as it was. I had integrated it so perfectly that when, years later and in good faith, I duplicated some of its passages, I could have sworn I had written them myself'.

The same phenomenon occurs during meetings where the aim is to find a solution to a complex problem. Often, at the very beginning of the debate, one member will voice an idea that nobody pays attention to. After extended discussions, another member will voice exactly the same idea, and this time everybody will find it brilliant! The moral of the story is that having brilliant ideas is not enough, you have to share them at the right time. As it happens, people often need to allow an idea to settle in their minds, and will only be ready to hear it when it is submitted to them once again. In research, one has to appropriate a

¹⁴¹ B. Durand, "Les idées sont libres de parcours", *Réflexion d'une plagiée sur la portée d'un adage et de quelques autres réflexes juridiques*, in *L'urgence de l'intégrité académique*, ed. by M. Bergadaà and P. Peixoto (Caen: Editions EMS, 2021), pp. 243-55.

¹⁴² J.-P. Codol, 'Semblables et différents. Recherches sur la quête de la similitude et de la différenciation sociale' (unpublished doctoral dissertation, Université de Provence, 1979), p. 2.

model or hypothesis before making one's own modest empirical and/or conceptual contribution. Scientific work is a cumulative, slow, and above all collective endeavor, where it is difficult to identify one's own specific contribution.

When one researcher is working on a highly specialized paradigm and several teams around the world are working on the same subject, everyone will end up having more or less the same ideas at more or less the same time. This is something we often find in work on cognitive interviews, a method of interviewing witnesses and victims that places them in ideal conditions for providing their testimonies.¹⁴³ There are four or five main teams working on the subject around the world. Often, when reading a new article on the subject, a researcher may be annoyed at not having published quickly enough himself, or feel cheated, believing that he is reading his own ideas. When participating in international congresses and hearing about the latest advances, or when reviewing papers by 'competing' researchers, is it really possible to distinguish someone else's idea from your own when both of you have come up with the same idea?

The phenomenon reaches its peak in the relationship between a thesis supervisor and a doctoral student. There are a thousand ways of supervising a thesis and every relationship between a thesis supervisor and their doctoral student is unique. I have supervised seventeen doctoral theses and none of them were done in the same way. Each time, however, they were collaborative efforts, ending in an appropriation

¹⁴³ R. E. Geiselman and others, 'Enhancement of Eyewitness Memory with the Cognitive Interview', *The American Journal of Psychology*, 99(3) (1986), 385-401; A. Memon, C. A. Meissner and J. Fraser, 'The Cognitive Interview: A Meta-Analytic Review and Study Space Analysis of the Past 25 Years', *Psychology, Public Policy, and Law*, 16(4) (2010), 340-72; J. Py and others, 'Cognitive Encoding and Cognitive Interviewing in Eyewitness Testimony', *Swiss Journal of Psychology/Schweizerische Zeitschrift für Psychologie/Revue Suisse de Psychologie*, 56 (1997), 33-41.

process by the student. The student must first make someone else's ideas—in this case the supervisor's—their own, in order to understand them. Then, they have to take some distance from them, formulate new propositions and attain a level of autonomy certified by the resulting doctorate. It is therefore difficult to consider the notion of plagiarism of ideas between a thesis supervisor and a student. Furthermore, Ross and Sicoly have shown that, in a working group, each individual tends to believe they are contributing more than the others, which can constitute an endless source of conflict.¹⁴⁴ Hence the need to clarify deontological positions regarding the sharing of ideas.

6. The need for a code of deontology

Deontology (for this is indeed a question of professional practice) has been particularly strongly developed in the service professions, where it helps reduce the risks faced by users and professionals. As early as 1945 in France, a state decree establishing a code of deontology was applied to the medical profession. Later, similar codes were applied to other health care professions, and to architects, accountants, and notaries. A duty of solidarity between peers was thus formalized, helping to consolidate these professions. A peer review body also helped restrict the external control of the state. This is the case for the French Medical Council, which has the power to impose sanctions. Nothing of the sort exists in our profession, even though university disciplinary bodies may, after referral to the chancellor, investigate breaches of deontology and punish transgressors—sometimes severely. In France, appeal procedures are possible if the convicted person, the chancellor,

¹⁴⁴ M. Ross and F. Sicoly, 'Egocentric Biases in Availability and Attribution', *Journal of Personality and Social Psychology*, 37(3) (1979), 322-36; see also E. M. Caruso, N. Epley and M. H. Bazerman, *The Costs and Benefits of Undoing Egocentric Responsibility Assessments in Groups* (SSRN Scholarly Paper ID 738666) (Social Science Research Network, 2005).

the chief education officer, or the Minister for Higher Education and Research deems the sanction inappropriate. The appeal is processed by the disciplinary section of the CNESER (the French National Council for Higher Education and Research), on which the author of this chapter serves. Challenging an appeal decision is also possible by then referring the matter to the *Conseil d'Etat*, the French Supreme court for administrative justice. But rather than putting the emphasis on individual misconduct, scientific integrity requires collective support.

A code of deontology will always have more impact than the fear of potential sanctions. For professions that have one, it helps to create an oral process reflecting the values shared by a community, as is shown by the word's etymological origin, *logos*. Deontology calls for deliberations that clearly assert values accepted on both an individual and a collective level. Today, researchers have several charters: the European Charter for Researchers (enacted by the European Commission), the French National Deontology Charter for Research Professions (signed by the main French research bodies, such as the CNRS—the French National Centre for Scientific Research; INRIA—the French National Institute for Research in Computer Science and Automation; INSERM—the French National Institute of Health and Medical Research; IRD—the French Institute for Development; and the congress of university chancellors), and the French National Research Agency's Charter for Deontology and Scientific Integrity. It is commendable that major research organizations and research funding bodies have taken steps to promote scientific integrity, as is the fact that more and more universities are signing charters of this kind.

Finally, it is worth noting that the French Law no. 2020-1674 of 24 December 2020 on the 2021–2030 research program, which contains various provisions related to research and higher education, gives legal status to the notion of scientific integrity. We nevertheless believe that the support of the scientific community requires coordination between a

vertical thrust emanating from Europe, from each member state and from major research bodies, and more horizontal motion between international and national scientific societies and research laboratories. More than the fundamental rules and principles, which can be laid down and which concern all researchers, scientific integrity becomes a reality in day-to-day research practices, amid scientific collaboration.

7. Conclusion

Researchers are fundamentally good students.¹⁴⁵ They seek above all to satisfy what is demanded of them; like all good students, they even try to do so better than others.¹⁴⁶ They are therefore not the main perpetrators of the biases they engage in; they are mere players in a system. Scientific integrity will not be improved by focusing on individual responsibility, even that of scientific fraudsters (who simply conceal the bigger picture). We must rethink the entire system, starting with the issue of evaluating individuals, teams, and even institutions. The dependent variables of such evaluations must also be reconsidered.¹⁴⁷

In 2011, the French Academy of Sciences produced a report on the matter which offered interesting solutions, such as reviewing papers for

¹⁴⁵ S. Joy, 'What Should I Be Doing, and Where Are They Doing It?', *Scholarly Productivity of Academic Psychologists*, 1 (2006), 346-64.

¹⁴⁶ J.-P. Codol, 'Social Differentiation and Non-Differentiation', in *The Social Dimension: Volume 1: European Developments in Social Psychology*, ed. by H. Tajfel (Cambridge, UK: Cambridge University Press, 1984), pp. 314-37.

¹⁴⁷ J.-L. Beauvois and P. Pansu, 'Facteur d'impact et mondialisation culturelle', *Psychologie Française*, 53(2) (2008), 211-22; Beauvois and Pansu 2010; D. Páes Rovira and J. Salgado Velo, 'Indicadores de productividad científica: Implicaciones para la evaluación de la psicología española', *Boletín de psicología*, 97 (2009), 117-36.

their scientific contribution without regard to bibliometry.¹⁴⁸ In line with this report, the 2017 joint declaration by three academies (the French Academy of Sciences, the Leopoldina, and the Royal Society) on the good practices for evaluating researchers and research programs clearly stated that assessing research performance meant assessing ‘the quality, originality and importance of the scientific research’.¹⁴⁹ ‘Importance’ refers to the potential influence of the research in its relevant field.¹⁵⁰ In this chapter, we have evoked the idea of promoting peer reviewing and editing, which are the cornerstones of scientific research.¹⁵¹ Scientific supervision (of undergraduate students, doctoral students, and post-doctoral students) should also be given further consideration. The societal impact of research ought also to be emphasized.¹⁵²

In short, scientific output will be able to flourish in a genuine deontological breeding ground once researchers have the impression that they are doing good and useful work for science and society. And when they once again have the time and the desire to discuss the matter. Let’s talk about science!

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¹⁴⁸ Académie des Sciences, *Du bon usage de la bibliométrie pour l’évaluation individuelle des chercheurs. Rapport remis le 17 janvier 2011 à Madame la Ministre de l’Enseignement Supérieur et de la Recherche* (Paris: Académie des Sciences, 2011).

¹⁴⁹ Académie des Sciences, Leopoldina, and Royal Society, *Statement by Three National Academies on Good Practice in the Evaluation of Researchers and Research Programmes*, 27 October 2017, p. 4.

¹⁵⁰ Scott, ‘Peer Review’.

¹⁵¹ Spier, ‘The History’.

¹⁵² Scott, ‘Peer Review’.

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CAN PUBLICATION STANDARDS BE LOWERED DURING A PANDEMIC?

Hervé Maisonneuve

Abstract

The peer-review system is the guarantee of the quality of publications. It has its flaws and is sometimes contested, but we have no better alternative. The SARS-CoV-2 pandemic has led to an increased demand from researchers, journalists and citizens for rapid information. How have scientific journals evolved to rapidly disseminate research data that is as valid as possible? The number of manuscript submissions has doubled or tripled compared to similar periods in 2019 for most journals. Editorial boards were faced with unexpected volumes of articles to review, with a shortage of reviewers, in an environment of competition between researchers and journals to publish quickly. New sections have been created, peer-review has been accelerated and even simplified, with open access publications. Questionable research practices were observed; prestigious journals published articles whose quality standards were no longer those of normal times. Journals were manipulated with the complicity of the scientific community. These practices show that open science principles and declarations such as the Singapore Declaration on Research Integrity have little impact on the behaviour of some researchers.*

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1. Introduction

The main objective of editorial boards and editors is to apply quality control to the content of the manuscripts they review. Quality control is a responsibility shared by authors and editors, and this relationship is based on trust. An independent expert review provides a useful assessment of the work submitted for publication. Typically, two to three reviewers, selected by the Editor-in-Chief, provide advice to help the editor decide whether to accept or reject a manuscript. This peer-review system has flaws and is sometimes contested, but we lack a better alternative.

These flaws occur when reviewers start with an assumption of good faith and honesty on the part of the authors; reviewers have neither the mission nor the possibility of verifying the source data of a study. They cannot go into laboratories to examine the data. Peer review is contested because it is subject to controversy, undeclared conflicts of interest, and decisions that are not always based on scientific evidence. A report by the UK Parliament evaluated the peer-review process following the scandal when the measles, mumps, and rubella vaccine was accused of being linked to autism.¹⁵³ This 2011 report is still relevant 10 years later:

We found that despite the many criticisms and the little solid evidence on the efficacy of pre-publication editorial peer review, it is considered by many as important and not something to be dispensed with..... Innovative approaches—such as the use of pre-print servers, open peer review, increased transparency and online repository-style journals—

should be explored by publishers, in consultation with their journals and taking into account the requirements of their research communities..... Finally, we found that the integrity of the peer-review process can only ever be as robust as the integrity of the people involved. Ethical and scientific misconduct—as in the Wakefield case—damages peer review and science as a whole. Although it is not the role of peer review to police research integrity and identify fraud or misconduct, it does, on occasion, identify suspicious cases.¹⁵⁴

In 2021, peer review is still the main mission of journals and, according to surveys, it is much appreciated by researchers.¹⁵⁵ Researcher satisfaction with peer review increases over time and goes hand in hand with the trend toward quality over quantity of publications.¹⁵⁶

One of the goals of open science is to publish manuscripts and explain the accessibility of research data. Most developed countries have adopted regulations to develop open science similar to those in France.¹⁵⁷ Journals are transforming to meet open science requirements, and FAIR principles have been established (Findability, Accessibility, Interoperability, and Reuse of digital assets). The principles of open science should be better implemented concerning peer review: reviewers' opinions should be made available online when articles are

¹⁵⁴ House of Commons. Science and Technology Committee, *Peer Review in Scientific Publications. Eighth Report of Sessions 2010-2011* (London: The Stationery Office Limited, 2011).

¹⁵⁵ 'In Peer Review We Trust', *Communication Physics*, 3 (2020), Article 165.

¹⁵⁶ Elsevier and Sense about Science, *Quality, Trust and Peer Review: Researchers' Perspectives 10 Years On. A Study by Elsevier and Sense about Science* (2019).

¹⁵⁷ Ministère de l'enseignement supérieur, de la recherche et de l'innovation, *Plan national pour la science ouverte*, 4 July 2018.

published. However, open peer review is not accepted by scientific communities.¹⁵⁸

The SARS-CoV-2 pandemic in 2020 has led to an increased demand for rapid, validated information from researchers, journalists, and citizens. The pandemic has increased competition among researchers; in general, competition is a source of both innovation and questionable practices. How have scientific journals evolved to participate in this rush to obtain research data quickly—validated, if possible?

2. Fake news has overwhelmed the editorial offices of scientific journals

For most journals, during the first half of 2020, the pandemic led to a doubling or tripling of manuscript submissions compared to similar periods in 2019. This increase was observed in all scientific journals, primarily in biology and medicine, but also in social sciences, mathematics, and economics. For example, *Journal of the American Medical Association* received 11,000 manuscripts between 1 January and 1 June 2020, compared with 4,000 for the same period in 2019.¹⁵⁹

In PubMed alone, more than 80,000 articles were published between February and December 2020. A realistic assumption is that at least 160,000 COVID-19-related articles would be indexed in all databases beginning December 2020. There were approximately 30,000 COVID-19 pre-publications deposited in data warehouses in the same period. All pre-publication platforms put manuscripts online; in decreasing order of the number of manuscripts, they included medRxiv for medicine, SSRN

¹⁵⁸ T. Ross-Hellauer and E. Görögh, 'Guidelines for Open Peer Review Implementation', *Research Integrity and Peer Review*, 4 (2019), Article 4; 'In Peer Review We Trust'.

¹⁵⁹ H. Bauchner, P. Fontanarosa, and R. Golub, 'Editorial Evaluation and Peer Review During a Pandemic. How Journals Maintain Standards', *Journal of the American Medical Association*, 324(5) (2020), 453-54.

for social sciences, ResearchSquare for all fields, RePEc for economics, and bioRxiv for biology. Only a little more than half of these manuscripts may be published by peer-reviewed scientific journals, according to bioRxiv data estimating that 30% of pre-prints are not published.¹⁶⁰

COVID-19-related manuscripts competed with non-COVID-19-related manuscripts within journals. Sometimes the priority was to find ‘hot papers’, the so-called innovative articles cited in the media. Were publications on non-COVID-19 research delayed by editorial boards? The journal editors say no.

3. Editorial boards were not prepared

Editorial boards have faced unexpected volumes of articles to review and a shortage of reviewers in an environment of competition in which researchers and journals compete to publish quickly. Typically, a manuscript is reviewed by one or two journal editors, who either reject it out of hand or decide to seek the advice of reviewers and have the authors make changes later.

Journals have developed a variety of strategies to manage the volume of information while trying to attract readers. These include creating new columns to publish more articles; increasing correspondence, letters, and viewpoints without evidence; publishing research abstracts; accepting poorly evaluated preliminary results; decreasing the number of reviewers per article; allowing reviews by associate editors of the journal without soliciting external reviewers; decreasing the number of comments made to authors; and deciding not to require further analysis because confined researchers cannot go to

¹⁶⁰ K. R. Anderson, ‘bioRxiv: Trends and Analysis of Five Years of Pre-Prints’, *Learned Publishing*, 33 (2020), 104-09.

their laboratories. All COVID-19-related publications were made open access, which required adaptation of the publication process.

According to the editors of the journals, these changes did not impact the quality of the articles published. Reading some so-called innovative articles that present hypotheses and opinions instead of evidence, we have enough arguments to speculate that poor-quality articles are archived for eternity in the literature.¹⁶¹

The pressure on journals has encouraged dubious practices on the part of researchers: double submission of manuscripts, double publications, plagiarism, publication of articles that would never have been accepted outside of the pandemic, lack of disclosure of conflicts of interest, and rapid data analysis. For example, one article was submitted to three journals, all of which accepted it. The editorial boards, also subject to reminders and pressure from researchers and the media, wanted to work quickly. Speed and haste do not always guarantee quality. In prestigious journals, it has been observed that articles were published rapidly and that their quality standards were no longer those that would normally be followed.¹⁶²

Some journals are not aware of good practices in the retraction of articles. An editorial board decides on retraction after obtaining evidence of misconduct or honest errors. As of 20 September 2021, 139 COVID-19-related articles had been retracted, and 12 were retracted because of errors by the journals; seven articles with ‘expressions of concern’ should be followed by a decision on the validity or retraction of the article.¹⁶³ Retractions are also occurring faster than usual—only a few weeks after the publication. For the remaining COVID-19-related

¹⁶¹ H. Maisonneuve, B. Plaud, and E. Caumes, ‘Pandémie à SARS-CoV-2: éthique et intégrité oubliées devant la précipitation pour publier’, *La Presse Médicale Formation*, 1 (2020).

¹⁶² Maisonneuve, Plaud, and Caumes.

¹⁶³ RetractionWatch. *Retracted Coronavirus (COVID-19) Papers*, 2021.

articles, the retractions were mainly due to misconduct and never because of honest errors. This is evidence of the competition between researchers and journals and also of the weak response by the scientific community in recognizing misconduct. How is it imaginable that only 139 retractions have occurred for approximately 250,000 published articles, some of which should have never been published? If publication quality was an objective of the scientific community, there would have been fewer articles published and many more retractions.

4. Journals have been manipulated with the complicity of the scientific community

We will take just one example of the manipulation of an editorial board. Dr. Didier Raoult (of the Marseille university hospital institute, France) published a study showing the efficacy of a combination of hydroxychloroquine and azithromycin in treating COVID-19. This publication is not cited in this chapter so as not to contribute to the journal's undeserved impact factor. Indeed, this article was cited nearly 5,000 times in the seventeen months following its publication, an unprecedented record given that an article cited 50 or even 100 times is already remarkable. In this study, twenty-six patients were treated, compared to sixteen untreated patients from other clinical sites, which is already alarming because the treated and untreated patients were from different locations. Of these twenty-six treated patients, six were excluded from the analysis, contrary to good clinical practice (three were transferred to intensive care, one died, one was lost during follow-up, and one exhibited intolerance). The efficacy criterion was not clinical but biological, with a PCR test that is sometimes fallible, done on the fifth day and not on the sixth and fourteenth days as planned in the protocol. The publication was submitted to a journal whose Editor-in-Chief was one of the authors of the manuscript, suggesting that a conflict of interest facilitated and accelerated the decision to publish the

article. The publication appeared fourteen days after the authorization of the ethics committee for a fifteen-day study. There are several sources for the list of questionable practices in this research, including an article by an independent expert. The conclusion of this opinion is as follows:

As outlined below, this study suffers from major methodological shortcomings which make it nearly if not completely uninformative. Hence, the tone of the report, in presenting this as evidence of an effect of hydroxychloroquine and even recommending its use, is not only unfounded, but, given the desperate demand for a treatment for Covid-19, coupled with the potentially serious side-effects of hydroxychloroquine, fully irresponsible.¹⁶⁴

This assessment was not the only one, and despite the evidence of bad practice, the journal was unwilling to retract the article, which would have been the only reasonable decision.

The manipulation of editorial boards, which are generally complicit, is well known. It is a sign of complacency in publishing articles by colleagues or a search for a higher profile by artificially increasing the number of citations. Certain manipulations can increase the impact factor rapidly. The well-known manipulation of journals was described during this pandemic, using the journal *New Microbes and New Infections* as an example.¹⁶⁵ This type of behavior is neither new nor surprising, since researchers control the editorial board. Such journals

¹⁶⁴ F. R. Rosendaal, 'Review of: "Hydroxychloroquine and Azithromycin as a Treatment of COVID-19: Results of an Open-Label Non-Randomised Clinical Trial Gautret et al 2010, DOI:10.1016/j.ijantimicag.2020.105949"', *International Journal of Antimicrobial Agents* 56 (2020), Article 106063.

¹⁶⁵ Y. Gingras and M. Khelifaoui, 'Être juge et partie, ou comment contrôler une revue scientifique', *The Conversation*, 21 June 2020.

have been described as self-promotional journals.¹⁶⁶ As of 2022, increases in impact factors will be linked to publications on the pandemic. These are clear conflicts of interest, but none of the few whistle-blowers have been listened to.

5. A failure of open science

Research communities have rapidly adopted open science movements. Its definition in the French plan is: ‘Open science is the unfettered dissemination of research publications and data. It builds on the opportunity presented by the digital transformation to develop open access to publications and—as much as possible—to research data’.¹⁶⁷ The unfettered dissemination of research data does not mean imposing free online access without access codes but imposing at least communication with researchers about a research project. These are the FAIR principles. Social conventions and *omertà* in the scientific community have made us forget these good intentions during the pandemic. To claim that open science should lead to better dissemination of the principles of scientific integrity seems optimistic and unsupported by evidence.

If open science had been applied, asking for a spreadsheet on the twenty-six patients in Raoult’s initial study would have been a simple way to verify the analyses of the initial research on the hydroxychloroquine-azithromycin combination. Having these data analyzed by independent third parties approved by all stakeholders would have been simple. It is the basis of the normal function of

¹⁶⁶ C. Locher and others, ‘*Publication by Association: How the COVID-19 Pandemic Has Shown Relationships Between Authors and Editorial Board Members in the Field of Infectious Diseases*’, *BMJ Evidence-Based Medicine* (Published Online First: 30 March 2021).

¹⁶⁷ *Plan national pour la science ouverte*.

scientific journals and the principles of open science.¹⁶⁸ How many legitimate players could have demanded data from this research? First and foremost, those cited or thanked in the initial article: the French National Research Agency, the Health Agencies, the National Agency for the Sanitary Safety of Medicines and Health Products; the manufacturers of the molecules concerned; the presidents of the University of Aix-Marseille and the University of Nice; and the directors-general of the hospitals in Marseille and Nice. Other parties not mentioned in the article should have come forward, such as the National Council of Physicians, the decision-makers who based recommendations on these unverified preliminary data, and the scientific integrity officers of the universities concerned. They knew that their careers were threatened if they spoke out. Only the *Société de pathologie infectieuse de langue française* has filed a complaint, but it is isolated in the face of political lobbying.

6. A failure of the Singapore Statement

The rereading of the declaration on research integrity is both pleasant and worrying: all the great principles propagated by institutions and researchers have been flouted due to social convention.¹⁶⁹ There are 14 responsibilities, of which the following three are proposed for our consideration:

- Responsibility 1: Integrity: Researchers should take responsibility for the trustworthiness of their research;
- Responsibility 3: Research Methods: Researchers should employ appropriate research methods, base conclusions on

¹⁶⁸ ICMJE, *Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals* (International Committee of Medical Journal Editors, 2019).

¹⁶⁹ World Conferences on Research Integrity, *Singapore Statement on Research Integrity*, 22 September 2010.

critical analysis of the evidence and report findings and interpretations fully and objectively;

- Responsibility 4: Research Records: Researchers should keep clear, accurate records of all research in ways that will allow verification and replication of their work by others.

We all agree with this statement, but continuing to issue charters, consensuses, declarations, and recommendations every two or three years since 2010 is pointless. Continuing to say that we need to change, that we need to abandon ‘publish or perish’ research evaluations is exciting but it has no effect. Yet we keep on doing this.

Was it possible to publish poor-quality papers during this pandemic? There are arguments that the publication standards of some journals have declined, but the research and editorial communities assess them differently. Most editorial boards are run by honest researchers who have done their best under pressure from other researchers and the media. The basis of the system is trust between the research community and the editorial boards of journals, which is all the more necessary because the same people can be both authors and editors of journals.

Societies for editors, such as EASE (European Association of Science Editors), issued advice in April 2020 along the lines of:

We recognise that in times of crisis it may not always be possible to obtain all required data, and that reporting may—of necessity—be curtailed. To avoid misinterpretation, but also to facilitate the rapid sharing of information, we encourage editors to ensure that authors include a statement of limitations on their research.¹⁷⁰

The goal was to request transparency from authors who could not ensure the integrity of all their data and to discuss the limitations of the

¹⁷⁰ EASE statement on quality standards

research. Is it acceptable to publish data that may be incomplete, to inform the population as quickly as possible?

7. Lessons learned by scientific journals

Many scientific journals reacted well to this unexpected influx of manuscripts in just a few months. They were able to process them, sometimes rapidly, and perhaps to the detriment of articles considered to be of lower priority. They reduced the time needed to make decisions and made articles that are usually accessible by subscription or with a per-article payment freely available. Could practices learned in emergency situations become sustainable? Will open access to COVID-19-related articles (and possibly others) be permanent? All procedures have been adapted, and some decisions will have a lasting impact on the functioning of journals. Journals that faced difficult situations have learned from them. For example, *The Lancet* and *New England Journal of Medicine* published articles with data from an administrative database owned by a private company. When they requested access to the data, they were denied. These journals were unable to verify the research data and eventually retracted the articles concerned.¹⁷¹ The argument for retraction was that the data were not verifiable because the company refused to make them available (if there was a suspicion of fraud, it was not proven). As a result, the twenty-one Lancet group journals amended their data evaluation procedures. Here is an excerpt from their decision:

Changes to the signed declarations by authors in the author statements form will require that more than one author has directly accessed and verified the data reported in the

¹⁷¹ M. R. Mehra, F. Ruschitzka, and A. N. Patel, 'Retraction—Hydroxychloroquine or Chloroquine with or without a Macrolide for Treatment of COVID-19: A Multinational Registry Analysis', *The Lancet*, 395 (2020), 1820.

manuscript. We will require that the authors who have accessed and verified underlying data are named in the contributors' statement. For research Articles that are the result of an academic and commercial partnership, one of the authors named as having accessed and verified data must be from the academic team.¹⁷²

It is clear that the pandemic has impacted scientific journals' practices and that this impact has pushed journals to improve. The pandemic may have had more power than learned societies and other organizations that issue recommendations for good practice (see the box below). The ultimate goal would be to have an accreditation-type mechanism for scientific journals to ensure the quality of their operations rather than waiting for further pandemics or scandals.

8. Conclusion

Health crises, like wars, require urgent and immediate decisions. To guide researchers, professionals, and even the media and politicians, it is important to publish sensitive data very quickly. Observations suggest that normal standards have been forgotten and the principles of scientific integrity have been ignored. Social conventions and the code of silence have facilitated the dissemination of unvalidated data during the SARS-CoV-2 pandemic. Scientific journals sometimes participated in these games. Institutions did not activate mechanisms to demand or share the research data. However, this pandemic has led some journals to become self-critical and thereby to improve their functioning. Most researchers do not want to promote bad science, which should never be published.

The practices observed during this pandemic show that the high principles of open science and the lofty declarations in the Singapore

¹⁷² The Editors of the Lancet Group, 'Learning from a Retraction', *The Lancet*, 396 (2020), 1056.

Statement on Research Integrity have little impact on the behavior of individual researchers. Is the scientific community prepared to take steps to prevent the recurrence of events that are so calamitous for science and society?

Scientific journal procedures and codes

There are many peer-reviewed scientific journals and they are listed differently by discipline. For the STM (Science, Technology, Medicine) segment, 2018 estimates report 33,000 journals in English and 9,400 in other languages.¹⁷³ These journals publish approximately three million articles per year, and private publishers manage most of them. There are no reports that have estimated the number for the HHS (Humanities and Social Sciences) segment. Journals in the HHS segment are more commonly university press journals in a wide range of languages.

Peer-reviewed journals all function on the basis of trust between authors and editors, with an identical process: submission of a manuscript, evaluation by an editorial board with or without external reviewers (blind or open peer review), transmission of a decision to the authors (rejection or acceptance with or without major or minor modifications), resubmission of a corrected version before the final decision. The differences relate to authorship practices: in the STM segment, there are often many authors, some of whom are not very involved in the article; for HHS journals, on the other hand, there is typically a small number of authors (three or fewer) and all of them are very involved in the writing. Journal owners manage resources and expenses and make decisions on editorial boards.

Editorial boards often follow the recommendations proposed by the learned societies of editors. The most important ones are the

¹⁷³ (Johnson, 2018)

Council of Science Editors and the European Association of Science Editors.¹⁷⁴ The International Committee of Medical Journal Editors annually updates recommendations, parts of which are adopted by all scientific disciplines.¹⁷⁵

Publishers come together in learned societies, such as the Society for Scholarly Publishing and the International Association of Scientific, Technical, and Medical Publishers.¹⁷⁶ Publishers have created the Committee on Publication Ethics.¹⁷⁷ This non-profit association, known as COPE, aims to specify good publication practices, with a key commitment to scientific integrity. COPE has a case bank to train editors (and researchers) in good practices.

Researchers can consult the organizations mentioned above, but they generally have guides to responsible research. These guides exist in most countries, provided by research organizations, universities, and scientific integrity organizations. Consider, for example, the European Code of Conduct for Research Integrity.¹⁷⁸ It contains paragraphs aimed at authors of publications, including data management and practices; collaborative work; publication and dissemination; editorial review, evaluation, and control; and scientific fraud and other unacceptable practices, including plagiarism. Similarly, the global network of academies has published a book on the conduct of responsible research and

¹⁷⁴ <https://www.councilscienceeditors.org/>; <https://ease.org.uk/>

¹⁷⁵ <http://www.icmje.org/>

¹⁷⁶ <https://www.sspnet.org/>; <https://www.stm-assoc.org/>

¹⁷⁷ <https://publicationethics.org/>

¹⁷⁸ ALLEA, *The European Code of Conduct for Research Integrity* (Revised edition) (Berlin: All European Academies, 2017).

appears to be interested in a publication control process that does not yet exist.¹⁷⁹

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¹⁷⁹ InterAcademy Partnership, *Doing Global Science: A Guide to Responsible Conduct in the Global Research Enterprise* (Princeton, NJ: Princeton University Press, 2016).

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8.

JOURNALISM, SCIENCE, AND INTEGRITY

Dominique Leglu

Abstract

Trust is the basis of the relationship between journalists and scientists, between editors and scientists, as we recall here, in an article based on our experience of several decades of publishing in the press and publishing industry. The integrity of specialists, whose initial writings are reviewed by their peers, is not a priori questioned. However, shortcomings do exist and the question of verifying information, its sources and even its veracity is increasingly being raised. It is also necessary to ensure that the writings do not contain plagiarism (or self-plagiarism) or fraud. Publications (newspapers, magazines, books, etc.) could then be accused of counterfeiting or copyright infringement - which could cost them dearly - and lose their credibility. In addition to academic standards, legal standards apply here. Some concrete examples that we have had to deal with, both in the press and in publishing, illustrate our point.*

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1. A journalist's personal view: 'the problem is getting worse'

I have been a journalist since 1980, and in forty years, only a few 'singular cases' have brought the issue of fraud in science to my attention.

Initially (and this is important in my reflection and the view on the issue of integrity that I would like to share here), I became aware of the issue of plagiarism. Following my thesis in particle physics at the Collège de France (1978), I took a two-year course at the Centre de Formation des Journalistes (CFJ) in Paris (1978–1980), where we were clearly reminded of journalistic ethics. After the reworking of various declarations and charters, some of which date back several decades (notably the one called the Munich Declaration of the Duties and Rights of Journalists or Charter of Munich), the eighth of the ten responsibilities under the charter states that *journalists must refrain from plagiarism*.¹⁸⁰ While working on my thesis, I was clearly informed by the laboratory scientists and I thought it evident that, when we adopt any method of work or use data, we had to quote the authors of that method by name and find and quote the original articles clearly in the bibliography, with plenty of notes and references. This seemed to me an obvious and coherent way of proceeding, and this was in the late 1970s. Similar rules apply to journalists (see the box below).¹⁸¹

¹⁸⁰ Charter of Munich, 1971: 'No. 8. Plagiarism, calumny, slander, libel, and unfounded accusations are grave professional offenses, as is accepting any form of bribe'; European Federation of Journalists, *La Charte de Munich*, 1971.

¹⁸¹ Syndicat National des Journalistes, *Charte d'éthique professionnelle des journalistes*, 1918/38/2011, 9 March 2011.

Charter of Professional Ethics for Journalists (2011)

[...] shall hold critical thinking, truthfulness, accuracy, integrity, fairness, impartiality, as the pillars of journalistic action; shall hold groundless accusations, intent to harm, alteration of documents, distortion of facts, misappropriation of images, lies, manipulation, censorship and self-censorship, failure to verify facts, as the most serious professional misconduct.

[...] shall quote colleagues whose work they use, shall not commit plagiarism.

[...] shall not confuse their role with that of a policeman or judge.

The issue of scientific fraud really began to emerge in the 1980s, particularly with the Baltimore affair, named after David Baltimore, winner of the Nobel Prize for Medicine in 1975. Articles began to appear, although sporadically, in newspapers like *Libération* (for which I headed up the science section (1986–1992) and then the *Eureka* section (1992–2000)). Paradoxically, for many French newspapers, the Baltimore affair (which lasted from 1986 to 1996) may have dampened awareness of the phenomenon as, after being accused, Baltimore was officially cleared. In this high-profile case, which was covered worldwide, Thereza Imanishi-Kari, lead author of an immunology paper co-authored by the Nobel laureate, was accused by one of her students, Margot O'Toole, of falsifying the results. For more information, read the 1996 article entitled 'Le biologiste et la drôle d'affaire', written by a journalist at *Eureka* magazine, Natalie Levisalles.¹⁸² The article contains a range of elements explaining the complexity of the case: facts (examination of the

¹⁸² N. Levisalles, 'David Baltimore, 58 ans, prix Nobel de médecine, fut pendant dix ans au cœur d'une ubuesque histoire de fraude. Il retrouve ses fiefs: Recherche sur le sida et politique scientifique. Le biologiste et la drôle d'affaire', *Libération*, 5 November 1996.

laboratory notebooks); interpretation; personalities of the accused and accuser, of the investigators themselves, of the institutions, etc.

In the mid-1990s, questions about ‘abuses of scientific information’ began to emerge and circulate in the scientific and medical community, and specifically in the National Consultative Ethics Committee (CCNE). Answers to two questions that I put to two of its eminent members, the well-known scientists Henri Atlan and Lucien Sève, in 1995 still merit reflection a quarter of a century later, and especially during the COVID-19 pandemic:¹⁸³

[...] Ultimately, your opinion is addressed to both the scientific community and the press?

Journalists were indeed originally seen as the bad guys. Then we discovered that *some scientists were behaving badly*, that circuits were being set up between them and certain journals, and that it was high time to call for the ‘*ethicization*’ of *research teams*’ and *institutes*’ behavior. *The problem is no longer one of individual behavior but of institutional policies*. In the ruling, we also point out the new role being played by venture capital companies, in which biologists become shareholders or create companies to exploit their own discoveries. This makes *financial interests clash directly* with scientific information.

What would be the role of the ‘independent body’ you would like to see created?

It should foster the public debate that this report has sought to set up and propose possible measures, for example, to promote ‘corrections of information’. Currently, the right of reply only exists against defamation. But what can be done about *excessive or false publications* due either to *researchers*’ irregularities (through error or fraud) or to the

¹⁸³ D. Leglu, ‘Le Comité d’éthique s’inquiète des dérives de l’information scientifique. Henri Atlan et Lucien Sève jugent trop médiatisées certaines recherches’, *Libération*, 6 July 1995.

press, mainly as a result of its headlines, which often exaggerate the content of the articles?¹⁸⁴

Note that twenty-five years ago the Internet was still in its infancy in France (at *Libération*, the use of the Internet dates back to 1994), and what is generally referred to as the media (with the exception of ‘primary’ scientific publications) means what is now called the ‘traditional’ media (television, radio, print media). Social networks had not yet emerged.

Could it be said that, from the end of the 1990s and into the 2000s, more and more events highlighted the phenomenon of fraud as a serious issue? It was becoming increasingly common. A survey of articles dealing with this issue on the website of the magazine *La Recherche* shows that the first of these articles stating that ‘fraud [is] a topical issue’ dates back to 1999. The magazine ran a cover story on the subject of scientific fraud, nearly twenty pages long—a sign that the problem was getting worse and clearly needed bringing to the attention of the readership of *La Recherche*. In addition, well-read members of the public, this included many researchers and students. The article is a reminder of the six most important cases of the time, dating back to the late 1990s: the Baltimore case cited above, but also Hermann and Brach in Germany (falsification and manipulation of at least forty-seven publications, a notorious case that triggered ‘a profound reflection on fraud’ in Germany); the Bihain case in France (‘highlighting the dysfunctions of the French anti-fraud system and at the origin of some current changes at Inserm’); the plagiarism case in China (prompting ‘the adoption of a new code of conduct’); and the Folkman, Angelides, and Seeburg cases in the United States.¹⁸⁵

¹⁸⁴ I have highlighted what still seems relevant.

¹⁸⁵ Archived on the site: ‘Fraude: Une question d’actualité’, *La Recherche*, September 1999.

Following these reminders, specialized systems are now being set up, particularly in the United States, to investigate fraud, fraudsters, and institutions alike. At the same time, there is reflection on how legal protection can be provided, especially when damages are sought in the courts.

2. An editor-in-chief's view: 'trust but be wary!'

As the head of two scientific magazines since the early 2000s, and having participated in the publication (including numerous translations) of several books on cosmology, physics, neuroscience, paleontology, etc., it seems to me that journalists and/or editors, in constant contact with French or foreign scientists, mainly '*trust*' their *scientific interlocutors*. It still seems possible to have quality exchanges with peers and distinguish between reliable journals and predators, especially with the help of new players (PubPeer-type platforms, scientists themselves on social media or public forums, articles that appear increasingly often in generalist newspapers, the work of the Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA), etc.). However, 'singular cases' are timely reminders of possible fraud by certain scientists or their partners. In 2020, the prestigious medical journal *The Lancet* and then the *New England Journal of Medicine* retracted a publication (fraud by the company Surgisphere) that stuck in people's minds that attracted attention after protests by numerous scientists who spotted the inconsistency of certain data.¹⁸⁶

In the course of my work, I have seen several cases in which editorial and sometimes financial decisions had to be made: the decision to halt publication of a book, to clarify grievances affecting the quality of our own magazines, or to testify before a commission of inquiry, etc.

¹⁸⁶ 'Le Lancetgate, symptôme d'une recherche devenue "foireuse"', *Challenges*, 11 June 2020, 45.

3. The Jonah Lehrer case: fall of a rising star...

In the late 2000s, I suggested that the publisher Robert Laffont translate into French some works by Jonah Lehrer, then a rising star in the world of scientific books in the United States, especially his best-seller *Proust Was a Neuroscientist* (published in 2010 in France). There was a serious issue following publication of his third book on creativity, for which the rights had been acquired from his agent and for which the translation into French had begun; an investigation by the journalist Michael Moynihan produced evidence that several quotations by Bob Dylan had been altered. Immediately, there was a huge scandal in the United States. The publisher Houghton Mifflin Harcourt recalled 200,000 books from circulation. I intervened with the management of the French publishing house at the time to stop the translation and have the rights refunded by the very powerful, internationally known agent who had negotiated them. The French management agreed to go ahead with this very rare procedure, despite the costs already incurred. Since this episode, Jonah Lehrer has lost all his (not inconsiderable) prerogatives as an author and no longer works with prestigious titles such as *The New Yorker*, from which he has resigned, *Wired*, which has ended its collaboration, etc. Other examples of misconduct (self-plagiarism, plagiarism of press releases, borrowing from certain scientists, etc.) have also been discovered. The trust placed in this Columbia University neuroscience graduate originally led to all these collaborations. And the fraudster was only found out after a serious investigation was conducted and published. Joe Nocera of the *New York Times* noted about a year later in his op-ed that ‘instead of being ashamed and atoning, Lehrer is trying to monetize’ the situation, including at conferences. And responding to one editor who said that

‘Lehrer deserved a second chance’: ‘No. Anyone who has made a serious mistake and wants a second chance has to earn it.’¹⁸⁷

4. The Auxerre interviews: truth and lies

For several years, the Entretiens d’Auxerre (Auxerre interviews) were held in the French town of Auxerre, under the leadership of the sociologist Michel Wieviorka (former president of the Fondation de la Maison des sciences de l’homme in Paris); they brought together numerous specialists on a given topic (they were suspended in 2020 due to the public health crisis). From 12 to 14 November 2015, the chosen topic was ‘Truth and Lies’. When asked, I suggested that the issue of ‘Fraud in Science’ be raised. I will briefly summarize a few elements here as everything said during those three days is engraved in our memories, and was published in a subsequent book (*Mensonges et Vérités*).¹⁸⁸ In both public and private life, the place occupied by lies and their opposite, truth, is ambivalent. In politics, the dream of a transparent society has led to a totalitarian nightmare. At first sight, lies are incompatible with the democratic ideal, which they pervert. Yet they seem to have become inherent in political life, even though it is more difficult than before with new communication technologies, which favor the spread of conspiracy theories. Lies and secrecy are sometimes associated with higher values: should we not accept the existence of state secrets, or family secrets, to make it possible to live together? Lies and secrets also make it possible to stand up to power or domination, protecting the private space, which is constantly threatened by intrusion.

¹⁸⁷ J. Nocera, ‘How to Monetize Plagiarism’, *The New York Times*, 8 June 2013.

¹⁸⁸ On the evening of 13 November 2015, the terrorist attacks in Paris took place, which were analyzed by the specialists present in Auxerre, according to their field of competence, on the morning of Saturday, 14 November; *Mensonges et Vérités*, ed. by M. Wieviorka (Auxerre: Éditions Sciences humaines, 2016).

This book reflects on the conditions that would strengthen democracy and living together by reducing the number of lies (and secrets). In addition to historical reminders (the archetype of scientific hoax, the famous ‘Piltdown Man’), I believed then that the issue of fraud ‘had become a serious one’ and that we should ask ourselves ‘if it even went so far as to call into question how the current scientific system works, especially the way experiments, discoveries, inventions are published...’.¹⁸⁹

In my article on fraud today, I mentioned spectacular cases such as the Hwang Woo-Suk case (2004–2005, allegedly the first cloned human embryo), Haruko Obokata (2014, a supposedly very simple method of obtaining stem cells), and the Olivier Voinnet case (a brilliant French scientist who published articles that had been ‘intentionally manipulated’), and briefly mentioned the water memory case (Jacques Benveniste, unreproducible experiments), Henrik Schön’s transistor, which caused considerable confusion at the prestigious Bell Labs, and various hoaxes demonstrating the lack of rigor in many supposedly serious journals.¹⁹⁰

I quoted French scientist Philippe Froguel, a researcher in endocrinology, who reminded us in an article published in *Le Monde*, that the ‘cases covered in the media’ (quoted above) ‘are only the tiny tip of the cheating iceberg.’ Let us remember the scathing first sentence of this column: ‘Just like doping in sport, fraud discredits science, discredits researchers, and sows doubt about the very value of research.’¹⁹¹

¹⁸⁹ D. Leglu, ‘La fraude en science’, in *Mensonges et Vérités*, ed. by M. Wieviorka (Auxerre: Éditions Sciences humaines, 2016), pp. 121–31.

¹⁹⁰ Leglu, ‘La fraude en science’; D. Delbecq, ‘Les travaux révolutionnaires du chercheur fraudeur’, *Libération*, 5 October 2002.

¹⁹¹ P. Froguel, ‘Prévenir la fraude, dopage des scientifiques’, *Le Monde*, 24 August 2015.

5. Problematic cases for *Sciences et Avenir*

As a result of the research done for this conference, following publication by the *Journal du CNRS* in 2014 of ‘Seven Famous Cases of Scientists Accused of Fraud’, and after the publication of an interview with its president Alain Fuchs in 2015, entitled ‘We shall not compromise on integrity’, it seemed to me that French scientific institutions were starting to take the subject more seriously.¹⁹² It was envisaged that ‘training in scientific integrity would be provided for all staff recruited’. I began to follow these issues more closely.¹⁹³

5.1 The Étienne Klein case

In November 2016, the magazine *L'Express* published an article by journalist Jérôme Dupuis denouncing plagiarism by the well-known physicist and philosopher Étienne Klein, from France's Alternative Energies and Atomic Energy Commission.¹⁹⁴ In addition to multiple literary examples of borrowings from famous authors such as Bachelard, Stefan Zweig, and Zola, there was mention of word-for-word plagiarism of a physicist I knew well, Roger Balian, taken from a text published in the *Dictionnaire de la pensée écologique*. In addition, in a column in the daily newspaper *La Croix*, extracts from the book *La Matière-Espace-Temps* by Michel Spiro and Gilles Cohen-Tannoudji were used. Astonished by this article, I undertook to further research these breaches of integrity.¹⁹⁵ In addition to checking what my colleague from

¹⁹² Y. Pigenet, ‘Sept cas célèbres de scientifiques accusés de fraude’, *Le journal du CNRS*, 3 December 2014; L. Lis, ‘Nous ne transigeons pas avec l’intégrité’, *Le journal du CNRS*, 10 July 2015.

¹⁹³ D. Leglu, ‘L’Office français d’intégrité scientifique s’installe’, *Sciences et Avenir*, 24 March 2017.

¹⁹⁴ J. Dupuis, ‘Plagiat: les copier-coller du physicien Étienne Klein’, *L'Express*, 29 November 2016.

¹⁹⁵ ‘Étienne Klein: “Je ne démissionnerai pas de la présidence de l’IHEST”’, *Sciences et Avenir*, 30 November 2016.

L'Express had written, I discovered many other examples, including serious plundering from an Italian professor of the history of science who had protested as early as 2005 (emails, exchanges with translators and the author, etc., sent confidentially to the committee mentioned below). Above all, I noticed that *La Recherche* and *Sciences et Avenir*, the two journals I edit, had been victims of plagiarism and massive self-plagiarism in previous publications—so much so that some readers even drew it to our attention (by email and post). I presented all this at a hearing before a committee set up by Thierry Mandon, then Secretary of State for Research and Higher Education, chaired by Prof. Michel Cosnard, President of the High Council for the Evaluation of Research and Higher Education. As a result, the committee recommended that Klein resign from his new position at the head of the Institut des Hautes Études en Sciences et Technologie, whose goal is to foster links between ‘science and society’, a dialogue between scientists and citizens. He refused to do so. Only a decree signed by François Hollande, the then President of France, and two ministers (Research and Education) terminated his position.¹⁹⁶

However, just as the New York Times journalist Joe Nocera found in the case of Jonah Lehrer, the perpetrator of the infractions later played the victim and took advantage of media platforms. Today, he is editor of a collection of books and continues to host a program on a major cultural radio station, France Culture. Clearly, no lessons have been learned by the publishing community or by many media outlets (unlike what happened in the United States in the Jonah Lehrer case, as shown by major newspapers and magazines such as *The New York Times* and *The New Yorker*).

For our magazines *Sciences et Avenir* and *La Recherche*, at least two issues of a different order can be highlighted. Firstly, *respect for our*

¹⁹⁶ M. Enserink, ‘French Physicist Accused of Plagiarism Seems Set to Lose Prestigious Job’, *Science Mag*, 6 April 2017

readers and their trust. The promise of original articles must not be broken by plagiarism or self-plagiarism. The credibility of our media is at stake.

The suspicion of forgery. Our press group pays a specialist company to track plagiarism of our publications on the Internet. Legally, plagiarism is counterfeiting. What we print has value, both intellectually and commercially, and we threaten anyone who copies us with legal action. If we find ourselves committing forgery by plagiarism or self-plagiarism of an author, we in turn may be threatened with legal action.

This is clearly not minor fraud, although the academic world sometimes considers it as such ('The consequences only concern the author himself', *Journal du CNRS*, or 'Self-plagiarism, a minor form of plagiarism', *Corvol Report*).¹⁹⁷

5.2 *The Samir Amghar case*

In 2018, I was alerted by a group of researchers (the 'Committee for Probity in Social Sciences') to a massive case of plagiarism affecting 'more than 70 different authors' in a book entitled *Le salafisme aujourd'hui, mouvements sectaires en Occident* by Samir Amghar.¹⁹⁸ The book was drawn from a thesis defended by Samir Amghar, a doctor of sociology, and the fraud concerned his academic work. He defended a thesis in 2010 at the École des Hautes Études en Sciences Sociales

¹⁹⁷ P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d'État chargé de l'Enseignement supérieur et de la Recherche*, 29 June 2016; L. Ben Ytzhak and Y. Pigenet, 'Le plagiat à l'ère du copier-coller', *Le journal du CNRS*, 12 December 2014.

¹⁹⁸ S. Amghar, *Le salafisme aujourd'hui, mouvements sectaires en Occident* (Paris: Éditions Michalon, 2011; 'Plagiat "massif" du sociologue Samir Amghar, spécialiste du salafisme: des institutions réagissent', *Sciences et Avenir*, 15 March 2018.

(EHESS) which was awarded a ‘very honorable mention with unanimous congratulations from the jury’.

6. Conclusion: ‘keep it in the family’

French institutions hardly reacted at all. The EHESS never ‘proactively’ followed up, despite promising to do so. The group of scientists who blew the whistle preferred to remain anonymous for fear of reprisals. Despite asking for the data proving massive plagiarism to be judged objectively (due to their anonymity), they were reproached for hiding behind that very anonymity. I personally found it very worrying that certain institutions, and especially the Ministry of the Interior, who opened their doors to a fraudster, did not engage in a dialogue (at the very least with me, who provided the evidence), to determine whether the person might have been party to important decisions at the heart of French administration. Several years later, I believe that French institutions have not yet acquired the necessary maturity to deal with issues of fraud or plagiarism.

In the field I know best, scientific popularization or, more broadly, scientific publishing, certain practices go beyond disloyalty and can be condemned solely on the basis of ethics. Here I mean what is seen in the scientific world as minor fraud, namely self-plagiarism. Some scientific articles, published in journals or on websites, communicate research results directly, and certain parts of these articles, for example explaining how a particular measurement is done, are written in a very ‘canonical’ way. That is not what I am referring to. For a journalistic publication, quality is almost always related to the novelty and exclusivity of a story, unless it has been taken from a press agency or a press conference open to a very wide range of media, etc. This publication, with a few exceptions, is a ‘product’ intended to be purchased by readers who rightly expect something new (unless the publisher or the author or both explicitly state that it has already been published).

Concealing the fact that large excerpts or the entirety of a previously published work have been used is, as previously mentioned, counterfeiting. Will popular publications be required to run all their submissions through a similarity checker in the future, as universities or schools do with their students? Reproducing a piece of writing can greatly benefit authors financially, as they get paid several times for different submissions; from a narcissistic point of view, it can also seem a clever calculation, as plagiarists can leave their mark in several places, leading to greater recognition by the public, but also, possibly, by peers or even economic and political leaders, at least as long as the fraud remains unmasked.

Unless it is complicit, the medium (publishing, print media, radio, television, websites, etc.) may find itself trapped. Its readers (listeners, viewers, Internet users, etc.) are misled about the quality of the information provided (novelty, exclusivity, etc.), which can damage its credibility. It may also risk being sued for intellectual property infringement. Here, it is no longer only academic standards that apply but legal ones.

In the academic field, a clear understanding of the phenomenon does not seem to have trickled up to the level of high-stakes research either. This is especially true of the issue of the ‘breakdown in the transmission of knowledge’, insisted on by Michelle Bergadaà, professor emerita at the University of Geneva and president of IRAFPA. The issue is not just a moral one—a breach of professional ethics, etc.,—but a reshaping of the research and publication process. Quoting sources and references lies at the heart of scientific and academic activity. Altering data means breaking with a culture of academic honesty and endangering a ‘healthy’ and fair future for future publications. These elements, which are fundamental in the scientific universe, are not easily taken into account in the legal world, which functions according to different criteria. Sometimes issues of intellectual property are not sufficiently understood

by students and professors. Some high-level cases, such as that of the acting director of the CNRS, Anne Peyroche, a biologist alleged to have cheated in several PubPeer publications, have still not been cleared up.¹⁹⁹ There is a lot still to be done to stop the ‘hard knocks to science’ (as those concerned about fraud note), despite the setting up of the OFIS (French Office for Scientific Integrity) in 2017 and multiple integrity officers in universities and research centers.

And I have not even mentioned the difficulties faced by the victims of fraud and plagiarism. Who should they turn to? Who will listen to them? What trust can they place in institutions that seem to prefer to ‘keep it in the family’ and spare themselves criticism rather than resolve a conflict, analyze it, and respond accordingly? Let us not forget the ‘moral’ damage suffered by the victims, which is often scarcely considered. In the case of plagiarism, it results from what can be called a vision other than the legal one:

‘Illicit appropriation of all or part of someone else’s work’. According to Laure Marino, professor at the University of Strasbourg and specialist in intellectual property law and technology law, it is like ‘a murder kept in the family where the author is done away with, and someone arranges to be the author in his place’.²⁰⁰

¹⁹⁹ A. Jouan, ‘Sanction a minima dans l’affaire Peyroche’, *L’Express*, 10 February 2020.

²⁰⁰ J. Lasterade, ‘Publications frauduleuses en Allemagne. Accusé par un étudiant d’avoir falsifié des résultats, un biologiste a été suspendu’, *Libération*, 21 October 1997; H. Wormer, ‘Herrmann, docteur ès fraudes. Ce cancérologue allemand réputé falsifie depuis quinze ans ses publications. Un ‘Tchernobyl de la science’, selon la presse outre-Rhin’, *Libération*, 26 October 1999; S. Huet, ‘La fraude est vieille comme la science’, *Libération*, 24 December 2005; L. Marino, ‘Le plagiat, un mot en vogue’, *Le blog de Laure Marino—Droit IP/IT*, 19 December 2014.

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9.

THE ETHICS OF SCHOLARLY PUBLISHING AND ACADEMIC SOCIAL MEDIA: AN ODD COUPLE?

Chérifa Boukacem-Zeghmouri

Abstract

The chapter addresses the issue of the ethics of scientific publication to academic social media. This new approach allows us to highlight two important issues in the mutation of internalities and externalities in the course of scientific communication. First, the strategies by which new actors in scientific publication, originating from the Web, seize the principles of Open Access to reformulate them and subordinate them to their own development and monetisation strategies. Secondly, the functionalities and services developed contribute to introducing a new media dynamic into researchers' practices. These raise ethical issues because of their incompatibility with the normative values of science.*

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1. Introduction

In the last twenty years, scholarly communication has undergone changes involving digital technology that have caused its socioeconomic norms to be revised. These changes are documented in numerous publications that clarify the mechanisms whereby the scholarly publication subsector has been forced to restructure under the pressure of new design, production, distribution, and promotion methods.²⁰¹ The implementation of Open Access to scholarly information and new Open Science policies being put in place are the main factors involved in the transformations we are witnessing.²⁰² They are modifying how research content is distributed and disseminated to scholarly communities and to society in general.

At the heart of these changes we find social media, which today represents one of the most visible aspects of the transformation of digital scholarly communication, mainly due to its widespread adoption by communities of researchers.²⁰³ Social media ‘refers to a set of services allowing the development of conversations and social interactions on the Internet or in a mobile situation’.²⁰⁴ Structured on digital platforms,

²⁰¹ C. Boukacem-Zeghmouri, ‘Nouveaux intermédiaires de l’information: nouvelles logiques de captation de la valeur’, *Information, Document, Données*, 4(52) (2015), 34-35.

²⁰² P. Suber, *Open Access* (Cambridge, MA: The MIT Press, 2012); Ministère de l’Enseignement supérieur de la Recherche et de l’Innovation (MESRI), *Plan national pour la science ouverte* (Paris: MESRI, 2018).

²⁰³ D. Nicholas and others, ‘New Ways of Building, Showcasing, and Measuring Scholarly Reputation’, *Learned Publishing*, 28(3) (2015), 169-83; S. Vignier, M. Joly, and C. Okret-Manville, *Réseaux sociaux de la recherche et open access. Perception des chercheurs: étude exploratoire* (Grenoble: Consortium Couperin, 2014).

²⁰⁴ MédiasSociaux, ‘En 2018 peut-on comprendre ce que sont les réseaux sociaux?’, *Médias Sociaux*, 1 September 2018.

these media offer collaborative functionalities that allow groups and even whole communities to come together.

These platforms, born on the web, have gained a foothold in a world that is foreign to them, that of scholarly research and publication. They have arrived with their own norms and values, and are contributing to reshaping the research landscape. This is why they have been the focus of considerable research work in recent years, analyzing their use and role in the media-based circulation of the content they host on their platforms. However, it is interesting to note that no questions of ethics have been raised. And it is even more interesting to explore why social media have been spared these questions.

Léo Coutellec defines ethics in an original way, positioning it as a reflexive axis between scholarly integrity, which he considers as a process pointing inward toward the community, and social responsibility, which he presents as a process pointing outward toward society.²⁰⁵ His approach allows him to offer a clear, articulate definition that corresponds to the issues dealt with in this chapter and also meets the objectives of the work in which it is included:

At a minimum, it is possible to qualify research ethics (RE) as an introspective process on the values and goals of scholarly research; scholarly integrity (SI) as a normative process that aims to frame the (good) practices of a community by establishing standards and principles; the social responsibility of science (SRS) as a political process, which aims to understand the context and anticipate the

²⁰⁵ L. Coutellec, 'Penser l'indissociabilité de l'éthique de la recherche, de l'intégrité scientifique et de la responsabilité sociale des sciences: Clarification conceptuelle, propositions épistémologiques', *Revue d'anthropologie des connaissances*, 13(2) (2019), 381-98.

consequences of science in an awareness of its actively involved character.²⁰⁶

Léo Coutellec's approach therefore commits us to raising the question of ethics in order to fully grasp the nature of the issues at stake in the changes caused by the arrival of social media in research and scholarly publication. Consequently, our research question becomes the angle from which we wish to address our subject: do the changes in scholarly publication caused by the emergence of social media call research ethics into question? Are they redefining these ethics in the light of their own regulations, which are adopted by researchers? Finally, do they entail a risk for the validity of the knowledge produced?

It is therefore from this angle that we focus our interest on the emergence of social media in the world of scholarly publication. Building on work carried out since 2015 concerning the observation and analysis of changes in scholarly communication, we will explore the ethical issues associated with the emergence of a new category in the field of research and scholarly publication and with the new rules they introduce.

This body of work, funded first by the European Commission and then by the Publishing Research Consortium, enabled us to create an observatory of the scholarly communication practices of young researchers on digital platforms. The panel of researchers observed was made up of 116 people from seven countries (China, France, Spain, United States, Poland, United Kingdom, Malaysia). Semistructured interviews were conducted with this cohort over three years (2016–2019), in order to understand and analyze their practices, but more specifically the changes in these practices with regard to the context in which they were rooted. Based on the daily and situated practice of researchers, this longitudinal dimension reveals the contemporary norms

²⁰⁶ Coutellec, 'Penser l'indissociabilité', p. 381.

of scholarly communication, in which social media plays an important role. This approach is interesting because it makes it possible to account for the role of social media in terms of both the externalities and the internalities of science in the making.²⁰⁷

2. Once upon a time in 2008...

Twitter and Facebook, the true success stories of the social and collaborative web, have also affected the academic world. Numerous studies have shown that scholarly communities have been far from oblivious to the allure of social media.²⁰⁸ However, the practice remained limited to certain individuals, and was not widely adopted by a community.

Connotea was the first academic social media launched by a scholarly publisher, *Nature*, which wanted its digital platform to include a collaborative dimension intended to bring an audience together.²⁰⁹ After a few years of life—more precisely, of experimentation—Connotea was retired in 2006.

From 2008 on, it was possible to observe real enthusiasm for academic social media take hold among researchers. This ‘new wave’ was driven by young PhDs who had grown up using the web, who knew and used mainstream social media (such as Facebook), but who had also played video games online. These representatives of the young ‘digital’ generation did not necessarily plan for an academic career and preferred to take the path of start-ups and innovation. They were, however, going

²⁰⁷ H. Nowotny, P. Scott, and M. Gibbons, *Re-Thinking Science. Knowledge and the Public in an Age of Uncertainty* (Cambridge, UK: Polity Press, 2001).

²⁰⁸ R. Van Noorden, ‘Online Collaboration: Scientists and the Social Network’, *Nature*, 512 (2014), 126-29; J.-L. Ortega, ‘Disciplinary Differences in the Use of Academic Social Networking Sites’, *Online Information Review*, 39(4) (2015), 520-36.

²⁰⁹ Wikipedia, ‘Connotea’, (2019).

to position themselves in the universe they knew best, the world of research, to offer new and innovative services based on digital capabilities. These services targeted a niche market: everyday research work.

Mendeley is undoubtedly the most iconic example of this phenomenon. The two PhD students behind this social media platform said that they dreamed of having bibliographic reference management software that would allow them to share—in the same way as on Facebook—the references that they had entered in their own library. That was how Mendeley first appeared in 2008: it offered shared, collaborative reference management, which could now be done within a group where the division of labor was organized. Mendeley has been what can only be described as a dazzling success.²¹⁰ In just a few years, this collaborative platform was adopted by millions of researchers, delighted to feel understood by their ‘colleagues’.

The date of appearance of these new players in the scholarly information value chain, who positioned themselves as real intermediaries, is not trivial. It corresponds to the subprime-related global economic crisis when growth had slowed significantly and the search for solutions to revitalize the global economy drew extensively on the help of digital models.

It is therefore no coincidence that countless academic social media platforms wanting to capture a particular domain in the cycle of research and scholarly communication emerged around this time. These social media platforms established themselves as new intermediaries, infiltrating scholarly communities, traditional players in scholarly communication (publishers, university presses, etc.), search engines (Google, Google Scholar), and bibliometric databases (Web of Science, Scopus, Dimensions) alike.

²¹⁰ ‘New Media Top 10 | Top 100’, *The Guardian*, 2021.

This positioning is based on the risk and innovation strategies specific to the players in the social media hive. They do not produce content, like traditional players, but instead promote content posted or ‘contributed’ by users. They offer many features dedicated to interaction, which, in turn, is valued by platforms seeking to develop their own value.²¹¹ This dimension is essential, because the search for a sustainable economic model allowing academic social media to survive in the landscape, and more specifically in the scholarly publication market, depends on it.

The proliferation of these platforms can be explained by their targeting of one or more activities in the research workflow.²¹² We can observe how they take root in available spaces of a researcher’s design and/or communication activities, so much so that it has led publishers to question the future of their roles.²¹³

Now that they themselves have become topics of research and analysis, the platforms are being examined primarily on the basis of their impact on researcher communities and the ways in which researchers use them, according to their different disciplines.²¹⁴ Their functionalities and metrics are analyzed as they evolve.²¹⁵

²¹¹ Boukacem-Zeghmouri, ‘Nouveaux intermédiaires de l’information’.

²¹² Y. Campfens, ‘Market Research Report: What Has Become of New Entrants in Research Workflow and Scholarly Communication?’, *Open Science Framework*, 2019.

²¹³ P. Smart, ‘Are Publishers Failing as a Service Industry?’, *Learned Publishing*, 29(3) (2016), 143-44.

²¹⁴ Collectif, ‘Les réseaux sociaux numériques de chercheurs en SHS. Proposé par Elifsu Sabuncu et Antoine Blanchard, animé par Nicolas de Lavergne et Olivier Le Deuff’, in *THATCamp Paris 2012: Non-actes de la non-conférence des humanités numériques*, ed. by. Collectif (Paris: Éditions de la Maison des Sciences de l’Homme, 2012); M. Thelwall and K. Kousha, ‘ResearchGate: Disseminating, Communicating, and Measuring Scholarship?’, *Journal of the Association for Information Science and Technology*, 66(5) (2015), 876-89; Nicholas and others, ‘New Ways of Building’; M. Thelwall and K. Kousha,

3. Platform values versus academic values

The legitimizing rhetoric mobilized by academic social media is grounded in the discourse markers of Open Access and Open Science. Information sharing, content accessibility, visibility, and search engine optimization (because they are well indexed by the Google search engine) are all arguments put forward to convince potential users of their value in the Open Access landscape.²¹⁶ They position themselves as a researcher's partners in the arena of academic competition, helping with the quest for reputation, visibility, and social recognition.²¹⁷ The slogans feature the conventional buzzwords again and again: impact, excellence, visibility, recognition, etc.

The socioeconomic analysis of their strategies based on openness and the collaborative paradigm shows positions that differ but converge on the reconciliation of two value systems.²¹⁸ First, we see the academic and symbolic values relating to the world of research and to the editorial model that places the publisher at the center of the process of promoting scholarly publication. Secondly, there are the media values relating to

'ResearchGate articles: Age, Discipline, Audience Size, and Impact', *Journal of the Association for Information Science and Technology*, 68(2) (2017), 468-79; Van Noorden, 'Online Collaboration'; Ortega, 'Disciplinary Differences'; W. Yan and others, 'How Does Scholarly Use of Academic Social Networking Sites Differ by Academic Discipline? A Case Study Using ResearchGate', *Information Processing and Management*, 58(1) (2021), Article 102430.

²¹⁵ D. Nicholas, D. Clark, and E. Herman, 'ResearchGate: Reputation Uncovered', *Learned Publishing*, 29(3) (2016), 173-82.

²¹⁶ G. Chartron, 'Stratégie, politique et reformulation de l'*open access*', *Revue française des sciences de l'information et de la communication*, 8 (2016).

²¹⁷ E. Orduna-Malea and others, 'Do ResearchGate Scores Create Ghost Academic Reputations?', *Scientometrics*, 112(1) (2017), 443-60.

²¹⁸ P. Bouquillion and J. T. Matthews, *Le Web collaboratif: mutations des industries de la culture et de la communication* (Grenoble: Presses universitaires de Grenoble, 2010).

digital platforms, which place the user—the researcher—at the heart of value creation. They therefore contribute to establishing the rule of ‘Get Visible or Vanish’ rather than ‘Publish or Perish’.²¹⁹ Although academic social media platforms try to establish harmony between academic values and media values, this does not necessarily translate into equivalence. This is reflected in the ambiguities of their strategies and of the practices of the researchers who use them.

Far from neutralizing each other, the two value systems are working together to enable the platforms to conquer larger and larger audiences, which they will use to secure new investment. This approach is essential if they want to last and to consolidate their standing in the digital scholarly publication market.

At a time when scholarly publication is dominated by publishers forming technological conglomerates, academic social media is in fact one of the strategies for undertaking takeovers, mergers, or partnerships. The publishers’ strategies are currently less focused on content producers than on operators of collaboration and sharing platforms. The acquisition of Mendeley in 2013 by the publisher Elsevier was the first step in this direction.²²⁰ The trend has continued over the years with the takeover of other academic social media platforms; the scholarly publication sector is therefore now predicated on the entanglement of content producers (users, researchers) and platform owners.

4. The blind spot of changing scholarly communication

In any process of change, the reference points tend to become blurred. This phenomenon can also be found in the transformation of

²¹⁹ J. Doyle and M. Cuthill, ‘Does “Get Visible or Vanish” Herald the End of “Publish or Perish”?’’, *Higher Education Research and Development*, 34 (3) (2015), 671-74.

²²⁰ Elsevier, ‘Elsevier Acquires Mendeley, an Innovative, Cloud-Based Research Management and Social Collaboration Platform’, *Elsevier*, 9 April 2013.

scholarly communication toward the digital sphere and Open Access. Academic social media have made full use of this context of blurred reference points to consolidate their monetized value, even if this is detrimental to the ethics of scholarly publication, which these days is based on the free dissemination of knowledge.

The first point is their Open Access rhetoric, which allows them to appeal to researchers to ‘deposit’ their publications on a given platform. These deposits are essential for increasing the critical mass of content that enters into their value-creation mechanisms. Academic social media therefore do not hesitate to use the same terminology as open archives and research infrastructures to encourage researchers to deposit their content. The enticements to deposit are so repetitive and systematic that researchers do not hesitate to describe them as spam.

However, uploading a document to a platform such as Academia or ResearchGate does not have the same benefits as archiving (or depositing) that same document in an open archive. The latter provides access to scholarly documents without any restrictions or barriers to access. Likewise, it guarantees long-term access to this content, thanks to its role as a research infrastructure. In the case of academic social media, on the other hand, you must have an account to be able to access content on the platform. Yet the number of such accounts created is an integral part of increasing the value of academic social media.

The work we conducted showed that the researchers we interviewed created accounts on academic social media platforms specifically to access articles.²²¹ This obligation to create an account does not correspond to either the principles or the spirit of Open Access. It also creates confusion for researchers between what is offered on a platform like Academia or ResearchGate and on an open archive like HAL

²²¹ D. Nicholas and others, ‘Where and How Early Career Researchers Find Scholarly Information’, *Learned Publishing*, 30(1) (2017), 19-29.

(*Hyper Article en Ligne*, the French national multidisciplinary research archive).²²²

Over the four years when we observed researchers' practices, those related to academic social media are undoubtedly the ones that underwent the most significant development. More and more researchers now have accounts on different social media platforms and they are developing more substantial, richer practices using the platforms' functionalities. These practices basically have two objectives.

The first is to seek contacts for collaboration. This is particularly true before a conference, where researchers know that they will have the opportunity to meet specialists; following a person on social media enables them to create a first level of proximity. The second objective is to acquire visibility for their publications and CV. The documents available on the platform will be indexed by Google Scholar and a detailed profile will be accessible to peers who are also on the platform. Aware that they will be 'googled' by recruitment or project evaluation panels, the early career researchers explained that they were careful to update and scrupulously enrich what has become much more than merely a personal page: it is also a showcase of their network of contacts, the scope of their interactions, etc. This showcase reflects researchers' status, which they can now display and cultivate.²²³

Another point, which is never addressed in debates about academic social media, is that, while there are many platforms, few of them last longer than four or five years. Some of those launched in 2008–2009 have completely disappeared. The question therefore arises of the future of the content on such platforms. Is the content just deleted along with the platform? Is there an archiving procedure? This essential aspect is seldom addressed and not always very clearly.

²²² Vignier, Joly, and Okret-Manville, *Réseaux sociaux*; Nicholas and others, 'Where and How'.

²²³ Nicholas and others, 'New Ways of Building'.

5. Researchgate, the perfect example of the ethical risks for scholarly publication

The example of ResearchGate is particularly useful for highlighting the ethical issues raised by the transformation of the world of scholarly publication. Launched in 2008 by Ijad Madisch, ResearchGate is not based in Silicon Valley like most other platforms, but in Berlin. Its claim to fame is that it offers a ‘Facebook for researchers’, adapted to their needs.²²⁴

5.1 *The success story from Berlin*

The success of ResearchGate is undeniable, and since 2010, the platform has offered scores to reflect researchers’ ‘impact’. The more articles a researcher submits and the more they interact with their network of contacts (by asking or answering questions), the higher their score. The method of calculating the ResearchGate score is opaque and has been the subject of research attempting to ‘crack’ the algorithm.²²⁵ It turns out that the score reflects both the researcher’s symbolic recognition, conveyed by their publications and citations, and their social recognition or status, reflected in the number of downloads, followers, etc.²²⁶

The ResearchGate score, now known as the ‘RG Score’, has established itself as a new indicator, adding to the criticism of the traditional citation indicators (Impact Factor or h-index) and to the new field of altmetrics, which explores the production and use of alternative

²²⁴ I. Madisch, ‘ResearchGATE Scientific Network: A First Step towards Science 2.0’, *Clinical and Experimental Immunology*, 154 (2008), 214.

²²⁵ S. Copiello, ‘Research Interest: Another Undisclosed (and Redundant) Algorithm by ResearchGate’, *Scientometrics*, 120 (2019), 351-60.

²²⁶ Nicholas, Clark, and Herman, ‘ResearchGate’; D. Nicholas, E. Herman, and D. Clark, ‘Scholarly Reputation Building—How Does ResearchGate Fare?’, *International Journal of Knowledge Content Development and Technology*, 6(2) (2016), 67-92.

indicators.²²⁷ Altmetrics are themselves a form of media and they are capable of driving the circulation of scholarly content on web platforms. In certain fields, such as medicine, the RG Score is so successful that researchers have incorporated it into their CV.²²⁸ In so-called emerging countries (e.g. Malaysia), researchers are presented at conferences with reference to their RG Scores. ResearchGate has capitalized on this success and has gained an ever-increasing number of users.

One of the negative consequences of this phenomenon is that the RG Score has become a goal in itself. While open archives struggle to convince researchers to deposit their publications and thus contribute to the construction of Open Access, researchers choose to upload their publications on academic social media platforms instead. Researchers are highly motivated to gain visibility for their work, particularly among their network of followers, and thus to increase their scores. And in most cases, they are convinced that they are participating in Open Access since the platforms present arguments encouraging this belief.

5.2 The time for legal action

ResearchGate has been so successful that it has consistently refused all takeover offers. It remains based in Berlin and has accepted investments from Bill Gates (the Bill and Melinda Gates Foundation) and Goldman Sachs amounting to tens of millions of dollars.²²⁹ From 2013–2014 onward, ResearchGate has become a flagship German start-up, and Ijad Madisch has been officially congratulated by Angela Merkel.

²²⁷ J. Priem, 'Altmetrics', in *Beyond Bibliometrics: Harnessing Multidimensional Indicators of Scholarly Impact*, ed. by B., Cronin and C. R. Sugimoto (Cambridge, MA: The MIT Press, 2014), pp. 263-87.

²²⁸ A. Bouchard, '#DeleteAcademicSocialNetworks? Les réseaux sociaux académiques en 2016', *UrfistInfo*, 30 August 2016.

²²⁹ S. Shead, 'Goldman Sachs and Bill Gates Quietly Invested \$52 Million in a Social Network for Scientists', *Business Insider*, 28 February 2017.

This success is not lost on the International Association of Scientific, Technical, and Medical Publishers (STM), which notes that the content available on ResearchGate is essentially composed of articles published in their journals. What ResearchGate monetizes is therefore based on the value of the scholarly content that STM members publish. The top player in international scholarly publishing, Elsevier, has therefore formed a kind of coalition, which asked ResearchGate to withdraw the articles that are the property of the publishers, because copyright was transferred from the authors to the publishers at the time of publication.²³⁰ Because ResearchGate failed to respond, the coalition appealed to the German courts in Berlin and launched a lawsuit. ResearchGate was therefore obliged to remove 1.7 million articles that had previously been circulating on the platform—and hence shared—illegally according to the coalition and copyright laws.²³¹

After this decision was announced in the media, no immediate impact was detected on the number of users of ResearchGate or on their activity. ResearchGate limited its action to inserting into its upload functions a message reminding researchers of the need to check the Open Access policy of the journal in which their article had been published, in order to verify which version of the content could be posted elsewhere and over what time period. Once again, we are back to the conflation of open archives and academic social media; this confusion contributes to the blurring of policies in researchers' minds, and of the boundaries between the different players in scholarly publication and their roles and responsibilities.

The main interest of the trial against ResearchGate is that it has enabled unprecedented debate about the new forms and new directions

²³⁰ R. Van Noorden, 'Publishers Threaten to Remove Millions of Papers from ResearchGate', *Nature News*, 10 October 2017.

²³¹ D. Singh Chawla, 'Publishers Take ResearchGate to Court, Alleging Massive Copyright Infringement', *Science Magazine*, 6 October 2017.

taken by the scholarly publication sector, with the arrival of new players and intermediaries on the web. The ethical dimension of ResearchGate's strategies, barely sketched out until then, was subjected to new scrutiny because of this episode. These strategies are at last taken into account in debates in the scholarly publishing profession, but also in scholarly discussions of analyses of developments in scholarly communication.

5.3 The time for partnerships

SpringerNature, the number 2 player in scholarly publishing, has chosen a different value capture path: a partnership. SpringerNature stated that it would prefer to engage in discussions with ResearchGate, because it explicitly recognized the important place the latter now occupies in the ecosystem of tools used by researchers. SpringerNature is therefore embarking on a partnership with ResearchGate, from which it wishes to learn more about researchers' practices, activities, and networks of contacts. SpringerNature also believes that it can learn a lot from ResearchGate's expertise in collaborative features. After several months of discussions, a pilot study was initiated by the two players around a corpus of articles owned by SpringerNature.

The pilot study has recently been published and reports on the observation of practices related to this corpus and points out the improvements and services that can be developed for easier access to the version of record, while respecting copyright.²³² ResearchGate has therefore served as an observatory of 'discoverability', which is defined in the scholarly publishing industry as the user experience associated with the consumption of content. However, nothing was said about the data passed on by ResearchGate to SpringerNature. The issue of personal data, owned by researchers, was not addressed either, even

²³² E. Hawkins and others, 'Researchers at the Centre: Content Discoverability, Visibility, and Access. An Evaluation of the Content Syndication Partnership between Springer Nature and ResearchGate', *SpringerNature.com*, September 2020.

though the platform is subject to the European data protection regulation. ResearchGate's silence and lack of transparency on this important issue highlight the importance of the continued existence of the ethical guardians of scholarly publication.

In this partnership scenario, ResearchGate has succeeded in legitimizing its role as an academic social media platform on the scholarly publishing scene. However, the market's unprecedented provisions and its new regulations have revealed a void that the original definition of ethics of scholarly publication does not address. The rules of ethics, which first became blurred, now seem to have been almost deactivated: designed as they were for a known model, they are now obsolete, or at the very least unsuitable, faced with a reality that has shape-shifted.

6. Conclusion

Academic social media now forms an integral part of the scholarly publishing world. Having grasped the nature of the needs of research communities, these players responded with digital platforms equipped with sharing and interactive features, presented as a contribution to the Open Access movement. The Open Access movement has therefore undergone a kind of reconfiguration, which served the platforms' development and monetization strategies. This has not been without consequences for the way in which researchers understand and practice Open Access today. Those who understand this phenomenon are leaving the platforms, which they believe have betrayed the spirit and ethics of Open Access. The announcements of Elsevier's takeover of Mendeley in 2013 and SSRN (Social Science Research Network) in 2016 upset the online scholarly community, some of whom chose to leave the platforms and close their accounts.²³³

²³³ Bouchard, '#DeleteAcademicSocialNetworks?'.

As a corollary, and diametrically opposed to the principles of Open Science, the example of ResearchGate shows that academic social media can introduce—or exacerbate—media strategies that direct researchers’ actions toward the objective of increasing their scores. The citation impact is no longer enough, it must be extended by a media impact.²³⁴ This leads researchers to become detached from their scholarly field, or from their institution, to the benefit of social media platforms, even to the point of handing over their personal data, which can then be monetized. Social media therefore becomes a vicious circle that encourages researchers to engage with the platforms, interact with them, and feed them new content as often as possible, in order to demonstrate their participation with the goal of media audience and status.

The ethical issues of academic social media coincide with the broader issues of ‘science platformization’, which affect both the externalities and the internalities of scholarly communication.²³⁵ Their nature incorporates the complexity of digital regulations and norms that intersect with the field of scholarly publication. They deserve to join the debate presented in this book, in order to restore its importance and intelligibility.

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BECOMING ARTISTS (AGAIN)!

Interview with Jean-Philippe Denis

Abstract

In this interview, which closes the section dedicated to the role of publishing in the urgency of integrity, we wanted to capture the analysis of a professor who has extensive experience in the world of publishing in the broadest sense. Jean-Philippe Denis is committed to the promotion of French-speaking management research and to how management sciences can and should inform public debate. He has been Editor-in-Chief of the management journal *Revue française de gestion* (RFG) since 2013. This multidisciplinary journal, in line with the original knowledge project of management sciences (explanatory, but also prescriptive and critical), is the leading French-language scientific publication in the field of management. Jean-Philippe Denis has also created an audiovisual laboratory dedicated to scientific promotion: IQSOG—Fenêtres Ouvertes sur la Gestion. In this capacity, he conducts academic interviews for Xerfi Canal, and more than 800 short videos have been broadcast in some seven years. The third aspect of his commitment consists in co-editing two collections (‘Grands auteurs francophones’ and ‘Lectures, relectures’) put out by Éditions Management & Société (EMS).*

* Corresponding authors: J.P. Denis. To quote this chapter: Denis J.P., “Becoming Artists (Again)!” in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023 pp.249-265, DOI: 10.58863/20.500.12424/4273099 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

Interview

• *Jean-Philippe Denis, do you think that our traditional system of publication by scientific journals is a danger to knowledge?*

This is a very complicated subject if we consider the diversity of practices that we encounter in the field of the so-called ‘exact’ sciences versus in the so-called ‘human and social sciences’, and even within these fields when we consider the variances between disciplines. Works by some fabulous writers have directly questioned the very status of science, from Gaston Bachelard to Paul Feyerabend or Michel Foucault, to name but a few...

I would therefore like to formulate the problem more concretely: does the double-blind evaluation of articles still make sense when we have the technical means at our disposal to engage in ‘open review’ or when, on the other hand, the best debates that I have ever witnessed around a manuscript have been ‘open’. This is the principle of the ‘wide-angle’ category that I initiated as soon as I became Editor-in-Chief of *Revue française de gestion*. I would therefore like to say that what first endangers knowledge is the fact that the entire system of scientific production is ultimately based on anxiety and fear: of not being published, of not being recognized, of not meeting the requirements set by institutions in terms of production. And when one finds oneself wearing the reviewer’s hat, this anxiety can be transformed into a spirit of revenge, according to the same principle whereby which battered children often become abusive parents.

So, yes, our traditional system of scientific publication is indeed a danger to knowledge, because it has been transformed into an issue of political power: publishing (or not) allows researchers and their institutions to shine (or not). In short, this is the whole paradox: how can one imagine that what some call ‘academic capitalism’ will produce anything other than what economic capitalism produces everywhere, and has always produced: a game with rules, and therefore more or less well-

organized fraud within the framework of these rules. And it is perhaps even worse in the scientific field, where the denial and outward show of disregarding questions of profit and money authorize—even justify—all the games of influence and shadowy practices.

But, when I see a young author with his manuscript, who is sometimes like a child in the street—alone, anxious, and worried, a perfect target of predatory magazines—I feel like telling him to always be wary of strangers who promise him candy or offer him a ride home and to never get into their cars. In other words, he should ask his professors and other young researchers questions. And when in doubt, he should only go to known and respected places.

We can then ask those who want to see our traditional system of publication by scientific journals disappear: what should replace it? What other practices would allow us to modify and/or improve it? For my part, I am convinced that we should reverse the trend: above all, we should not set objectives and encourage the next publication! On the other hand, why not set a maximum number of publications to be taken into account in the evaluation of researchers, beyond which an additional publication would no longer count? Why not also consider radical forms of self-organization of scientific production? Above all, why not spend much more time valuing what has been published rather than running in an endless headlong rush after what will be published?

• *Do you agree with Jacques Py (2021) that the shortage of reviewers and editors puts the whole system at risk? How would you describe an editor's pressure and workload?*

Of course, I agree, although I have never actually had to review an article myself because of a lack of reviewers. This is a point to which I am very sensitive and which I have endeavored to develop at the *Revue française de gestion*: multiplying the number of reviewers for a paper from the outset, sometimes contacting up to seven reviewers in the hope that at least one or two would respond. On the other hand, I have

sometimes accepted a paper on the basis of a single expert review or, on the contrary, to reject it, and I have rejected many, since the journal receives nearly 400 manuscripts per year.

My feeling again is that the system is very sick: the incessant pressure put on researchers to publish encourages them to publish too much, too young, too fast. This makes the system completely unmanageable, since the best colleagues end up being exhausted because they are constantly solicited for reviews. I therefore advocate three key ideas: (1) a general end to anonymity: for authors and reviewers alike; (2) compensation for authors and reviewers, as well as editors and members of editorial boards; and (3) accountability at all levels in the event of failures, especially on the part of editors, as a corollary to the compensation they would receive. Paradoxically, transparency about the fact that scientific activity is a source of income seems to me to be the best guarantee of recreating genuine independence in the field of knowledge production.

To come now to the question of the work that an editor's mission represents, I would like to answer: a colossal workload, yes... and no.

Yes, of course, because I will let you imagine what it means in operational terms to ensure the production of eight issues per year for a journal like *Revue française de gestion* and to administer nearly 400 manuscripts per year. When I leave the editorial office of *Revue française de gestion* in June 2021 after eight years of hard work, I will have the feeling that this mission alone would have been more than enough to occupy an honest worker. That being said, it would be hypocritical to complain: when I became editor-in-chief, the journal received a little more than 150 manuscripts per year and this was the heart of my work: to make authors want to submit their manuscripts to RFG, to choose this medium rather than another, to be proud to be published in it, and thus to reassure them about the processing time for their article. I am happy with the work we have done and, obviously,

when one obtains such a reward and satisfaction, the burden of the work necessary to achieve it is less heavy.

No, because in the end, as always, it all depends on how you see your mission. Today, the journal attracts authors to publish in it and guest editors to propose calls for papers and coordinate special issues; it is being read since it has nearly two million hits via the Cairn platform; it now has a base, built up by sheer force of will, of more than a thousand regular reviewers. In short, it has once again become a must in the French-speaking world. This is certainly the result of a Herculean effort. At the same time, what created the conditions of possibility was first of all the desire to do, to create, to invent new spaces, to give new productions the right to exist, to open new doors. My activities then grew and accumulated: teaching, research, writing, publishing, etc.

• *But being an editor also means making the final decision... Do you feel you are making more friends or enemies?*

I feel like asking the question again in a different way: to be a professor is to be a creator and an artist, and this consumes you because your passion always devours you.

As an artist, researcher, or editor, you have to have an appetite for the fight. Otherwise, you should choose another profession. When you fight, as you know, you always make a lot of enemies. But the more enemies you make, the more friends you make, too. And then, sometimes, yesterday's enemies can become tomorrow's friends and vice versa... These are the hazards of life, in research as elsewhere. On this point I would like to mention something I heard a father tell his children when I was young, which I have always found powerfully stimulating: 'I am not sure I always made the right choice for you, but at the time I did, I guarantee that I had in mind only to make the best choice for you'. These words have often come back to me when authors get angry about their reviews or when I have to argue about a rejection. For accepted manuscripts, it is obviously simpler: when two reviewers

(or one reviewer and one referee in case of disagreement between two reviewers) give the green light to publish an article, who am I to refuse publication?

The real question becomes: can one engage in this kind of editorial activity if one does not have this passion? And we must never forget that a journal is a common good, and that for its own good, it must pass from hand to hand... and not remain too long in the hands of one person.

• Is open science an alternative in the short and medium term to the deviations in our traditional academic journal model?

I don't believe in miracle solutions. Open science reminds me of the adage 'The road to hell is paved with good intentions'. Because I see several major flaws in open science: first, we forget that nothing is free, and that if it is open, it is because someone somewhere is paying and expects a return on their investment. The case of the Social Science Research Network (SSRN) should be discussed and thought about much more than it is. For the largest open access network, with more than 572,000 full-text 'preprint' articles in its database and more than two million users, built by one of the most ardent defenders of shareholder value creation (Gregg Gordon)... has finally fallen into the hands of Elsevier. That should give you food for thought!

In open science, I see first of all the motive and the means of a future impact war. And the frauds to come (e.g. in the citation calculation algorithms) could make old-style plagiarism or self-plagiarism look like your grandfather's scams...

But there are also real new perspectives because of 'open' that could seriously reshuffle the game. I would like to mention an example that may seem out of step, but, when you think about it, it is symptomatic: the #MeToo movement, denouncing sexual violence. This may be what can change practices: the fact that social networks, which are 'open' by nature, end up shifting the organizational and institutional lines. We could mention the VroniPlag Wiki, which collaboratively analyzes

doctoral theses, but also the case presented in Soufron's chapter in this book in which the denunciation came from an anonymous, collaborative Twitter account.

In other words, I believe in open, but perhaps not exactly in the terms in which it is traditionally understood.

• *Now let us talk about another way of disseminating knowledge: when and why did you decide to embark on the Xerfi Canal adventure?*

This is a major issue and one that is close to my heart, since what has been done over the past seven years with Xerfi Canal has been my way of putting all my convictions into practice.

When I applied for the position of editor-in-chief of RFG, I set myself an uncompromising goal: to gain recognition for the value of knowledge produced in the French language in general, and in management science in particular. With this objective in mind, I wanted to take the opposite view from all the journals for which it was necessary to remain within one's own specialty and to be recognized by the English-speaking world, by proposing to remain a generalist journal, open, I would almost say 'conglomerate' according to this strategic logic that financial analysts abhor. And this was to better aim at something else: enhancing the value of the work and injecting it into the public debate, in particular by establishing partnerships with media players.

Once elected, I immediately wanted to implement this project. I found myself facing at best silence, at worst a clear refusal from all the French newspapers I contacted. This project to increase the visibility of French management sciences was therefore at a standstill. However, I had previously tried various editorial innovations: self-publishing ebooks and creating a small digital publishing house, keeping a regular blog, being present on social networks, especially Twitter which was then, in 2010–2012, a real Wild West where everything seemed possible. Moreover, I was a subscriber and a big consumer of the programs I received in my mailbox, produced by Xerfi Canal

Productions—in particular, the interviews conducted by Jean-Michel Quatrepoint. So I simply wrote an email to the president of the Xerfi group, via the contact form on the site. He answered me within 15 minutes. The next morning, I was in his office and we agreed on the formula: I would interview *Revue française de gestion* authors using the resources of Xerfi Canal Productions.

The IQSOG letter—Fenêtres Ouvertes sur la Gestion, which is published on Saturdays, has about 5,000 subscribers. Xerfi's daily letters are sent to 100,000 subscribers. The formula is therefore unique. Of course, it is very easy today to record a video for an institution (the famous 'knowledge' offers). All the newspapers are also developing various video formats. On the other hand, the principle of an editorial collaboration led by an academic with total scientific freedom, with a radically independent actor, simultaneously involved in the media industry, but also in economic studies, is absolutely unique and has no equivalent in the world, to my knowledge. I am very proud of this, and infinitely grateful to the president of the Xerfi group and his teams for committing themselves to this project from the outset with unflagging enthusiasm. In seven years, we have produced more than 800 programs.

• *How has your collaboration developed over the past seven years through your audiovisual laboratory?*

I have outlined the process, but the constitution of the Xerfi group and our relationship deserves a closer look. Xerfi is a mostly family-owned company, dedicated to economic research. *Xerfi Canal* is conceived of as a kind of audiovisual magazine, since it is obviously more than a magazine. As time went by, we realized that professors', teachers', and researchers' needs for expression and visibility went far beyond the framework of *Revue française de gestion*, of which I was editor-in-chief.

We therefore decided to engage in a co-production dynamic and this is how I created a sort of innovative audiovisual laboratory dedicated to

scientific promotion, IQSOG—Fenêtres Ouvertes sur la Gestion. IQSOG uses Xerfi Canal's technical resources, but it is first and foremost an editorial collaboration that unites us: the programs produced within the framework of IQSOG are broadcast independently. All the programs are broadcast via *Xerfi Canal's* social media, but also those of *Revue française de gestion*.

IQSOG has gradually become a key forum for debate. I am very proud of this, because I know the quality of the debate. And I have also been able to measure, above all, how many of the subjects dealt with would never have been covered in traditional newspapers, where journalists alone would have been in charge.

- *Why did you choose this kind of program with this type of interviewee?*

The format of the programs is diverse (some programs have lasted more than twenty minutes!), but it is true that we are now focusing on formats of around five minutes. This is for a simple reason: the attention span on the web, which we know is very demanding. Our programs are used a lot in courses by teachers, and five to seven minutes appeared to be the best length.

Precisely because the world is speeding up. The weekly IQSOG—Fenêtres Ouvertes sur la Gestion letter and the daily Xerfi letters include seven programs, so you can see that a listener who watched each program in a letter in its entirety would spend about 30 minutes in front of her screen watching programs from IQSOG.

As far as the guests are concerned, I have several types: first of all, *Revue française de gestion* authors, who often also have other works to publicize (articles, books, etc.); then those who are now regulars, because they appreciate the exercise and have understood how much it also allows them to give new meaning to their job as a teacher; finally, the dozens and dozens of guests we meet here and there, whom we agree

to immortalize for a few minutes of eternity in a world where everything goes so fast.

To think that some programs were broadcast for the first time five or six years ago and are still regularly rebroadcast, month after month! This is because the principle is that each program must contribute something new; otherwise, it is not worth it. Of course, behind this ‘new’, there are many hours of work, disappointments, and joys, and so of passion, work, and courage. These are the hallmarks of all forms of creative work.

For the contributors are all artists: teachers whom I ask to focus on a point and talk about it without my interrupting or restating it. The format thus takes the opposite view from the drama of the race to publish: researchers produce a lot of indigestible and uninteresting writings in English-language journals that no one reads; while, at the same time, professionals, confronted with very new subjects, invent authentic solutions and very new knowledge. I have also had professionals on, but always because they were reflective and had things to contribute to the scientific debate.

This is precisely what IQSOG, as an innovative audiovisual laboratory, seeks to ensure: this bridge between worlds that no longer speak to each other. Today, there are around 800 programs in our ‘library’, mainly on the themes covered by *Revue française de gestion*: management, strategy, or organization, but we also welcome more specialized research (finance, marketing, human resources, etc.) and we are very open since many sociologists and economists have come to visit us!

- *Could this formula be a future solution to disseminate knowledge or to make a name for an author?*

My role has progressively become that of a real artist’s agent. And I am very proud of this because, having seen how difficult it is to break

down prejudices and open doors, my ambition was also to give a voice to those who had no access to visibility for their work.

If I may use a musical analogy that is dear to me, I would say that a magazine editor is like an artistic director: he receives projects, has them evaluated, selects them, and puts them into production and distribution. Then you have to make the public aware of your artists' work, which is precisely the purpose of the broadcast. I feel less like a talent scout (although I like this idea...) than a showman revealing the value of the productions that come to us from these artists that management researchers should always be, since their goal is to create something new.

Our formula—me alone with my guests—and not a debate about ideas between contributors, for example, was decided at the beginning by *Xerfi Canal*'s teams. I simply agreed to do it like that. We tried to debate ideas and even to organize controversies; but we noticed that the format of the program, and also the place, are more favorable to intimate interviews in a tone of confidence than to the 'clashes' that make the TV programs on twenty-four-hour news channels such a horror. Since one thing leads to another, the idea that only an academic could interview and truly listen to academics took hold.

Finally, after the musical analogy, we can take one from high fashion: the show is a kind of fashion show where authors come to present their creations. It is a deliberately high-end program, which also protects against the excesses arising from the need of traditional media, financed by advertising, to gain an audience, whatever the cost. And during a fashion show, it is neither the time nor the place to argue with others, but rather the time to proudly show off and explain your creations. IQSOG provides the setting for this. But this does not prevent some shows from causing heated debates, off set, as soon as participants come out... The proof: I was once threatened with a lawsuit because of

questionable research results and comments made by interviewees on set!

- *Could Canal Xerfi replace the old-fashioned conferences where people used to go to discuss ideas, which have been cut to the bone because of the pandemic? Do you fear that the post-pandemic period will affect these 'annual pilgrimages', to paraphrase David Lodge?*

In my view, these pilgrimages represented by the annual congresses of scientific associations lost their *raison d'être* long before the public health crisis. They have become mere stages in a process whose only outcome is the production of the next article. There is no longer any debate about anything, except for the purpose of managing careers, or even transfers between institutions. I will therefore go further and express the wish that they would disappear from the landscape, once and for all, in order to force people to invent something else.

And then, if you let a professor talk about his favorite subject for five minutes, he sincerely gives everything he believes in. You cannot cheat in this exercise. This is probably a powerful preventive tool because it is much harder to cheat or plagiarize in an on-camera interview than it is in front of a computer. This creates a real truthfulness effect.

Finally, the effect of media exposure and the dissemination of ideas at the speed of light creates a major risk for cheaters and manipulators. The site has over 6.5 million unique visitors per year. This creates a form of pressure in terms of responsibility: it would be awkward to come and expose oneself on screen to defend results of which one was not really the author...

- *Why not consider the integration step of doing Zoom conferences where participants would listen to a vignette (five minutes) and then debate the topic among themselves.*

In 2017, we launched the concept of ‘RFG events’: an annual ‘festival’ to celebrate the release of the end-of-year issue; ‘showcases’, several times a year, to highlight the release of each new issue.²³⁶ If I were to use the analogy borrowed from the music industry, I would say that we sought to import the logic of concerts into the academy so that artists can perform ‘live’.

We held two festivals, in 2017 in Grenoble, in 2018 in Paris; several showcases were organized within institutions: Luxembourg, Paris, Tours, Poitiers, etc. This is a subject I consider important, because authors, freed from the pressure of publication, can discuss their productions live with an audience. It’s so much nicer than moving on to the next piece without having the time to experience with an audience the song you have just composed and which has just been made available!

• *But do these true artists of which you speak, these researchers who take the time to carry out a long-term project, really exist? Or are we all condemned to chase after publications that are made fast, published fast, cited fast, and forgotten fast?*

Recent years have shown that nothing is set in stone and that the lines could move considerably. In any case, I find it hard to accept that young researchers whose doctoral schools now explain that their thesis can/should be based on articles or that the references cited must be less than three years old, should be placed under the same roof as experienced colleagues who have lived through these changes from the inside. They have often wallowed in it, sometimes out of conviction, often out of imitation and conformity. Or even out of self-interest, when they are co-authors with their doctoral students, who learn to produce but not really to think.

²³⁶ J.-P. Denis, ‘La RFG fait son cinéma’, *Revue française de gestion*, 270 (2018), 11-16.

So your question raises another point that is very interesting: is there a certain propensity, in the field of research as in others, for a kind of ‘McDonaldization of the academic world’? And here my answer is yes. Because, in the end, if the article counts for the author, if she has put her heart into it, one should never forget that for her institution or her publisher, it is the number of Big Macs sold that counts most of all—that the shelves are always stocked... In a way, the regularity of the flow counts more than the quality of the stock of knowledge that accumulates. I therefore feel like launching an appeal in which I firmly believe: authors must rediscover the paths to real independence and find the weapons to ‘pull their weight’ in fighting against this trend toward the McDonaldization of scientific and cultural production.

I will be even more precise: we must rediscover the meaning of research, that is to say, rediscover the joy of the creative act; otherwise, what is the point of spending hours doing research! This is why I like to remind people that the researcher is always an artist. There are many analogies to bring into play in order to invent other means of creating and promoting knowledge than the pre-formatted model of the academic article preconceived for an English-language journal that is highly ranked in the *Financial Times*! Cinema, music, literature give us many examples to ponder. They also remind us that, in the field of human affairs, the distinction between science and culture is delicate, to say the least. This also explains my attention to matters of scientific integrity and academic responsibility: I simply cannot bear the idea that an author can be robbed of the possession of his creations and thus of his ‘children’.

In Hollywood, screenwriters have sometimes been able to go on strike in order to influence producers. Real and authentic professors’ unions will probably be necessary from now on, even indispensable. It is time they looked into the meaning of the ‘deontology’ of a profession,

ours, from *deon* (from the Greek for 'duty') and *logos* (from the Greek for 'intelligible speech'). So let us talk about it.

• *To conclude, why are you such a faithful defender of the French language? Is it out of patriotism or because the dominant English-language thinking seems to you to be reductive?*

This is a wide-ranging debate on which many people have written much more pertinent things than I could say. I will therefore focus on some of my deepest convictions. First, discovering research, reading an author, letting yourself be affected by an article, a book or an author can change your life. Under these conditions, the principle of an *a priori* submission to a language or a standard is unbearable for me. For example, when I hear that a production is necessarily of low quality, because it is not written in English, I always feel like answering: it has often been said that black people's excrement must have been worth less than white people's, since they were not allowed to defecate in the same toilets, at certain times in history, in the USA or in South Africa... In short, I am sure you understand me: this *a priori* classification into 'quality' classes is always the vehicle of an ideology that we must flush out and fight for what it is and always tries to make us forget: an ideology.

On the subject of language, without even going as far as the subject of cultural diversity, which has been used to justify public policies in France in terms of cultural exception, I will just make this observation: the role and value of memory. However, the headlong rush to feed academic business mechanically erases memory; that is even its objective since only the next performance counts. This is precisely the reason for a collection such as the 'Grands Auteurs Francophones' that we launched and that I co-edit: to ensure this work, which is essential for individual freedoms and the critical and scientific spirit. This is the kind of memory that all tyrannies, always, try to erase... with their

obsession with burning books. There is no need to paint a picture, I think... This is a very serious subject.

Every time I hear a young colleague talk to me about these texts, many of which were no longer available, neither in paper nor in digital format, I am very touched by their reactions and to hear them say that they could never have imagined that so many beautiful things had already been said, and for so long! This is also why in 2015 we republished the most influential articles in the history of *Revue française de gestion*.

- *Are you an optimist?*

I hope I have shown you that I am!

We are all big consumers of Wikipedia, which is celebrating its twentieth anniversary this year, without ever deviating from its principles. Its model is the very representation of this concern with sharing, of this kind of tension between the new world of possibilities and the old world populated by powers that do not want to lose control... I would be delighted, on my own small scale, to think that I could contribute to creating a mini-audiovisual Wikipedia since all the IQSOG—Fenêtres Ouvertes sur la gestion programs are available on all video platforms (*Xerfi Canal* website, YouTube, Dailymotion, etc.), but now also audio, in podcast format (via Deezer, Spotify, Apple Podcast, etc.). So everyone can listen to them freely. And everyone who wants to contribute is welcome, provided of course that they respect our rules concerning contributions and scientific intent.

So I end with a recommendation to read a magnificent book whose existence I am very proud to have contributed to by creating the ‘Grands Auteurs Francophones’ collection at EMS: *Le temps entre science et*

création, by Michelle Bergadaà, published this year.²³⁷ It will soon be found on the IQSOG—Fenêtres Ouvertes sur la Gestion channel!

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²³⁷ M. Bergadaà, *Le temps entre science et création* (Caen: Éditions EMS, 2020).

**THE RECIPROCAL POWERS
OF THE LEGAL AND ACADEMIC ORDERS**

INTRODUCTION

*Marian Popescu**

What you will read in this chapter is a deep and sometimes disturbing dive into the little-known world where two orders—legal and academic—meet and occasionally collide. For what concerns us here is how we draw the line between what we find just and what we find unjust. If justice is viewed through the lens of one’s identity as a citizen and as a professional, it is possible to have a peaceful academic existence, with its certainties and panache... until such time as it is broken in a brutal and unjust manner.

In 2012, when I agreed to become president of the Ethics Commission of the University of Bucharest for four years, I found myself immersed in an extraordinary reality: the field of academic integrity. My first case? The plagiarism by the then Romanian Prime Minister of his doctoral thesis in law defended at the University of Bucharest in 2003. We were asked to declare whether—yes or no—this Prime Minister had unduly benefited from a title that allowed him to join the Bucharest bar. Let us note in this regard that it is now important to exchange stories from different countries about our misadventures, because when I read Jean-Baptiste Soufron’s article, I had a certain feeling of *déjà vu*. But back to our Romanian scenario. Work of an

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archeological nature among many and varied regulations and codes of ethics made it all too clear to me that a legislative framework of the academic field and consistent procedures resulting from it were deficient, when not totally nonexistent. I then wanted our Ethics Commission to adopt a reflexive mechanism by addressing the problem(s) of academic corruption. The very expression shocked people and seemed indecent in the public sphere. I took up my pilgrim's staff and, after many discussions with the Minister of Justice, the Parliamentary Committee for Education (Chamber of Deputies), and university rectors, I saw the need to create a special structure to review university policies and their legislative support, but also to organize training on academic integrity.

The Center for Action, Resources, Training for Academic Integrity (CARFIA) was established in February 2019.²³⁸ During the first two years of existence of this first Romanian university center dedicated to academic integrity, the greatest difficulties were caused by legal experts, who had their own references. But, little by little, we managed to speak in a common language. CARFIA is now an academic entity where uncompromising debate and integrity training occupy a central place, driven by the desire to incorporate integrity into the very culture of the university.

Such debate is essential for us to realize that the European legislative framework has a predominant place in the European Union's cooperation arrangements. This is at a time when the efforts of the Councils and the European Commission for the last twenty years have not managed to harmonize the member states' laws on education and research. As a result of the desire to maintain national autonomy, it is almost impossible to harmonize procedures, such as sanctions or remedies. As Romania's representative in ETINED, the Council of Europe's platform on ethics, transparency, and integrity in education, I

²³⁸ <https://carfia.unibuc.ro>

strongly supported the idea of a serious review of the role of integrity in education in relation to the legislative framework. It is a long-term and very painstaking job that calls for lawyers, councilors, and other legal experts to consider, carefully and rigorously, the gaps between the legal and academic communities. These gaps are where knowledge delinquents and their lawyers rush in. This is a new and provocative perception of our academic mission. But the risk is worth it, because Romania is far from the only country where corruption is one of the major obstacles to development, which could take place much faster.

The five chapters that make up this section all examine the space where the world of law and the world of university research meet each other. All but one (by a knowledgeable witness) are written by lawyers who are deeply involved in our cause, academic integrity. And they all deal with plagiarism and intellectual property. Far be it from me to see that as a deliberate choice by the editors of this book, neither of whom ignores scientific fraud in favor of plagiarism. Simply put, scientific fraud is treated almost exclusively in the hushed and closed-in world of academic institutions, while plagiarism is denounced, demonstrated, revealed to the general public by journalists, and debated in court. Thus, these five articles debate one another about the same question: who is responsible for integrity?

Catherine de Gourcuff, a lawyer at the Paris Bar, invites us to understand how justice intervenes in matters of academic integrity in court or in disciplinary proceedings. She observes how ill-equipped the academic order is, by its professional standards, for its procedures to constitute legally admissible arguments. Thus, many academic situations cannot be dealt with by the courts. For example? The term *plagiarism* does not exist in law, which refers to counterfeiting, a term that does not exist in the world of academic writing. Law finds it difficult to apply codes of research ethics, because legal and academic stakeholders do not identify the facts that laws provide for in the same way. And what about

the uphill struggle that awaits the plaintiff who must face a criminal trial? What researcher, what author, is willing to devote two to ten years of his life to these procedures?

Marie-Avril Roux Steinkühler, a lawyer at the Paris and Berlin bars, presents a comparative approach to French and German law governing plagiarism. Her historical reconstruction of these very different approaches reveals sometimes incompatible perspectives. In Germany, academic control over errors of integrity (including plagiarism) allows a broader approach than in France, where plagiarism (and only in the case of a simple copy-paste) remains a private matter entrusted to the courts. Briefly, despite the legal tools offered by copyright, universities are reluctant to enter the field in France. Moreover, the scientific character of a work represents an argument that is difficult to frame legally. The author tells the story of Béatrice Durand, a victim of plagiarism, to illustrate the differences between the two countries' legal systems, which make the defense of a victim so risky, even painful.

And then, Béatrice Durand expresses herself courageously and sensitively in her own chapter! What is fascinating here is the impeccable, even surgical, presentation. We learn that legal argumentation approaches plagiarism in terms of form and not of ideas, because ideas, which are at the heart of our profession, are 'free to roam'. What a misunderstanding! As for the 'expression', another concept used in legal provisions, it cannot be 'commonplace', even if it conveys an original idea. And what about the time an author collecting her data, so she understands them and come up with 'her own' idea? The author concludes that the law should clearly distinguish between *idea* as a conception and *idea* as a realization. We then understand why similar cases result in different court decisions. This is not due to individual judges' preferences but to structural ambiguities linked to the terminology of the legal and academic fields. It is time for the academic world to make its integrity-related terminology better known.

Finally, a clear article about access and sharing of research data! Sonya Morales, doctor of intellectual property law, explains Quebec's legal perspective on this subject—a sensitive one for researchers, institutions, and civil society. According to her, the rights to any data acquired during research remain with the institution, which is responsible for its custody and management under a trust. The different categories of data—primary, analyzed, and nominative—call for different approaches to justice in relation to property rights and their management. Sonya Morales places us in an interesting dilemma between access to and sharing of data for scientific interest and private or collective appropriation, for legitimate purposes of confidentiality or, conversely, exploitation of their economic value.

The last article, by Jean-Baptiste Soufron, a lawyer at the Paris Bar, is practically a novel that begins at what seems to be the end (we will know for sure in the future): in August 2020, the prestigious University of Paris 1 Panthéon Sorbonne canceled Arash Derambarsh's thesis in law. The extensive media coverage of this case made it one of the most debated cases ever to arise. It took an anonymous Twitter account to present evidence that was deemed sufficient to conduct an investigation and uncover the extent of the fraud. It also took a great deal of energy for the disciplinary procedure to be completed. The academic world has finally expelled the culprit, who does not belong to its universe. But if this thriller fascinates us, it is because it depicts clearly inadequate integrity training for doctoral students, the deficient use of anti-plagiarism software, the validation of a packed jury, public access to problematic theses, unclear regulations concerning what plagiarism is or is not, the unmet responsibility of university presidents... What if our institutions were reformed now?

Not only educational institutions but also European structures dedicated to academic integrity can benefit from the perspective offered by these five articles. It is up to them to initiate a self-criticism process,

then to engage in substantive dialogue with jurists in order to establish new preventive and disciplinary methods that are adapted to the evolution of and attacks against our academic integrity.

11.

SLOW AND UNCERTAIN JUSTICE IN MATTERS OF ACADEMIC INTEGRITY

Catherine de Gourcuff

Abstract

Catherine de Gourcuff, a lawyer at the Paris Bar, invites us to understand the ways in which justice intervenes in matters of academic integrity in court or in disciplinary proceedings. She observes how little the academic order is equipped, by virtue of its professional standards, to make its procedures legally admissible. As a result, many academic situations cannot be dealt with by the courts. An example? The term 'plagiarism' does not exist in law, it is called 'forgery', a term that does not exist in the world of academic writing. Justice has difficulty in using codes of research ethics, because the legal and the academic do not identify in the same way the facts that the laws have provided for. And what about the real obstacle course that awaits the plaintiff who has to face a criminal trial? What researcher, what author, is prepared to devote two to ten years of his or her life to these procedures?*

* Corresponding authors: C. de Gourcuff. To quote this chapter: de Gourcuff, C., "Slow and Uncertain Justice in Matters of Academic Integrity" in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.275-293, DOI: 10.58863/20.500.12424/4273102 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

1. Introduction

The title of this chapter might suggest it is reversing roles by bringing the civil, criminal, or administrative institution of justice to trial. Quite the contrary in fact, as French citizens and legal practitioners often observe that justice is a powerful social regulator, benefiting from its separation from the world of academia, which in turn guarantees its independence. According to the magistrate and philosopher Antoine Garapon, ‘Justice’s symbolic nature must signify the preeminence of discussion, and the primacy of ordinary law over all parties.’²³⁹ This preeminence and primacy are what enable judicial order within an adversarial process, but this process comes at a cost, and it has its own particular pace and risks that need to be assessed.

Regarding scientific integrity in academia, practitioners, lawyers, and legal experts dealing with a victim’s request have various tools at their disposal: the court, but also disciplinary procedures, alternative dispute resolution, conciliation, mediation, transaction, and arbitration.²⁴⁰ Which tools ought to be favored?

Since attempting to cover the vast field of legal practice would be over-ambitious, I propose to examine a personal experience, specifically the case of Guillaume L., which illustrates this issue well.²⁴¹ It shows that resorting to the institution of justice, however imperfect, risky, and even stigmatizing this may be, may nevertheless be unavoidable.

²³⁹ E. Mathias, ‘De la présomption d’innocence à l’innocence des présomptions: Le procès pénal dans l’ère de la post-vérité?’, *Droit Pénal*, 32(1) (2020), Study 3.

²⁴⁰ ‘ADR’ is favored by French legislation: Law no. 2016-1547 dated 18 November 2016 on the modernization of twenty-first-century justice seeks to appease conflicts and relieve congestion in courts; L. Cadiet and T. Clay, *Les modes alternatifs de règlement des conflits*, 3rd edition (Paris: Dalloz, 2019).

²⁴¹ First names have been changed.

Guillaume and Nicolas were university lecturers and researchers in physics and mathematics at two French universities, U and W. Nicolas was on the jury for Guillaume's thesis. After contacting all possible academic bodies in vain in 2014 and running out of mutual agreement possibilities, Guillaume decided to sue Nicolas and his publisher, R, before the Paris High Court in 2015. Nicolas had reproduced two articles co-written with Guillaume in 2009 and 2012, deliberately removing all references to his co-author, to supplement a second edition, released in 2013, of a book published under his name alone. The damage was serious as both articles were based on important work from Guillaume's thesis.

The judgment rendered on 15 December 2016 found in favor of Guillaume, after a rather complex legal debate requiring the participation of several witnesses on both sides. But the sentences were relatively light in view of the case's significance: 10,000 euros for psychological damage and, naturally, the obligation to name both co-authors in the disputed book, in addition to reimbursing legal fees also amounting to 10,000 euros.

Despite further demands by Guillaume, W University, which was informed of the judgment that had become definitive in 2017, did not take any disciplinary action against its lecturer and researcher Nicolas, whose career has not been affected in any way.

When we consider this case, which features counterfeiting and parasitic copying (the breaches of scientific integrity that are brought before the courts by far the most frequently), and when we also consider other decisions, we can make three observations.

First, the academic authorities within the university (the disciplinary tribunal) does not operate satisfactorily, for both structural and procedural reasons, forcing victims to resort to a court procedure. However, an ordinary law court, whether civil, penal, or administrative, can only settle disputes slowly and partially, although it

does provide a beneficial ‘primacy’. Alternative dispute resolution, which is rarely used, is a third and little known approach, but it cannot free academia from the need to reform its regulatory procedures.

2. The limits on academic practices

The lawyer who meets with an alleged victim of another academic for the first time, whether it is a lecturer and researcher or a student, cannot help being struck by the pressure bearing down on the various protagonists.

This pressure is exerted by the academic institution and is amplified by the dizzying availability of publications and forums where members of the academic community can express themselves. This can be summed up in a nutshell by the famous maxim ‘publish or perish’.²⁴² Open science has become a paradigm and a strong economic imperative.²⁴³ New technologies (copy-paste, translation algorithms, etc.) are accelerating and globalizing the sharing of ideas. Innovations are quickly reproduced, making them obsolete. Globalization also tends to blur normative reference points, while awareness of intellectual property law appears to be sparse within French universities (with the exception of legal experts, naturally).²⁴⁴

In this context, which requires stable reference points, disciplinary law in French academia seems to be deficient for several reasons.

²⁴² C. M. Case, ‘Scholarship in Sociology’, *Sociology and Social Research*, 12 (1928), 323–40.

²⁴³ EU Directive 2019/1024 on open data and the re-use of public sector information; ‘Scientific integrity and open science’, OFIS (French Office for Research Integrity) symposium, 4 April 2019.

²⁴⁴ C. Caron, ‘L’œuvre libre confrontée à quelques aspects du droit commun des biens et du droit d’auteur’, *Communication Commerce Electronique*, 7–8 (2018), 10–14.

In the past, French universities sought independence from judicial and political institutions. On 17 March 1808, they obtained an imperial decree stating that their councils would be granted disciplinary competence by setting up a litigation section (which is a jurisdiction within the meaning Article 6 of the European Convention for the Protection of Human Rights and Fundamental Freedoms).²⁴⁵ This is what makes them exceptions within the public service, on the grounds of the independence of lecturers and researchers, as is the case for other civil servants such as magistrates.²⁴⁶

Such aspirations are found in most liberal professions, and particularly in law. The aim is to have one's own rules in order to prevent the central authorities from interfering, while eliciting trust from the public. Lawyers created a form of professional oversight as early as the thirteenth century, and adopted a genuine unified national code of ethics in 1988, in addition to complementary rules specific to the Paris Bar, for example.²⁴⁷ The ethical union of European lawyers is a reality²⁴⁸.

But such independence bears a risk: the lack of the primacy described by Antoine Garapon, especially when the disciplinary system is neither substantiated by norms nor professionalized or open to third

²⁴⁵ Decree 2020-785 of 26 June 2020 nevertheless reserves the 'disciplinary jurisdiction' solely for lecturers and researchers and excludes the users (students), who are henceforth subject to administrative sanctions. For a critical analysis, see N. Philippe, 'La réforme des sections disciplinaires des universités: Une "déjuridictionnalisation" passée inaperçue', *Village de la Justice*, 9 June 2020.

²⁴⁶ M. Touzeil-Divina, 'Progression de la répression disciplinaire du plagiat de la recherche', in *Le plagiat de la recherche scientifique*, ed. by G. Koubi & G. Guglielmi (Paris: LGDJ, 2012), pp. 163-86.

²⁴⁷ C. Boërio and others, *Déontologie de la profession d'avocat* (Paris: LGDJ, 2020); M. Attal, *Culture judiciaire* (Brussels: Larcier, 2015), p. 14.

²⁴⁸ The European Code of Ethics has binding force (Article 21 of the Interior National Regulations for French Lawyers).

parties. From the external point of view of a legal practitioner, the academic disciplinary institution appears to be a closed community. Several very tangible problems inevitably arise.

First of all, only the chancellor of a university can initiate a prosecution (if that person is absent or at fault, it is the role of the rector), whereas other disciplinary procedures allow for referral by a third party.²⁴⁹ A reform of disciplinary procedure recently separated the procedure for lecturers and researchers on the one hand, which remains largely the same, from the procedure for users (students), where the scope for litigation is much broader and the procedure was dejudicialized but the referral slightly extended by Law 2019-828 of 6 August 2019 on the transformation of public service to ‘anybody who considers him or herself aggrieved by deeds imputed to the user’ through the rector.²⁵⁰

But which university chancellor can initiate disciplinary action? The chancellor of the university where the deed was committed, in other words the place where the alleged wrongdoer works, in most cases. If the deed is committed outside the university premises, the establishment where the incriminated person works is still competent.²⁵¹ This is also the case for lawyers: the order to which a lawyer belongs territorially is disciplinarily competent, but the procedure has more transparency and professionalism. Moreover, there are more lawyers, which generally (but not always) prevents a profession from being too closed-in on itself, and

²⁴⁹ Article R 712-29 of the Code of Education for Lecturers and Researchers and Article R 811-25 of the same Code for users. For a lawyer, ‘anybody concerned’ can refer a matter to the President of the Bar—P 72.2; *Avocats Barreau Paris, Reglement interieur du Barreau de Paris (RIBP)*, 22 October 2021.

²⁵⁰ Article R 811-25 of the Code of Education; Légifrance, *Code de l’éducation*, 2021.

²⁵¹ Article R 712-11 for lecturers and researchers and R 811-13 of the Code of Education for users.

the various bars do not compete with each other.²⁵² What university chancellor or member of a jury that has accepted a thesis would spontaneously incriminate one of their lecturers and researchers, or the person she has just congratulated?

Guillaume, the plaintiff, contacted the chancellor of the university where Nicolas was a lecturer and researcher in vain before he initiated legal proceedings; the rector remained equally silent. Only the minister's office answered Guillaume, telling him they had asked the chancellor of this university to examine his request. To no avail. The feeling of being stifled, even of *omertà*, continued after Guillaume brought his lawsuit before the judicial court: the testimonies, which necessarily had to be from colleagues working in similar disciplines, sometimes proved to be as difficult to obtain as tactical votes for an election to the *Académie française*.²⁵³

Secondly, there is no clear set of professional norms concerning the violation of scientific integrity to which a legal expert can refer.²⁵⁴ This means there is no set of common and specific rules, democratically established and with binding force, and the result is that people believe the law is toothless. Even though declarations and charters exist and continue to be drafted, these norms have little legal force; they are neither contracts (or if they are, they are simply membership agreements) nor codes negotiated and applicable to an entire

²⁵² In Paris, the Order of Lawyers comprised 32,000 lawyers, including honorary lawyers, in March 2020 (according to avocatparis.org/chiffres-cles), compared with 7,250 lecturers and researchers at the University of Paris (according to u-paris.fr/les-chiffres-cles).

²⁵³ In a more muted tone, see P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d'intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d'État chargé de l'Enseignement supérieur et de la Recherche*, 29 June 2016, pp. 4 and 19.

²⁵⁴ Namely a code of ethics; G. Cornu, *Vocabulaire juridique* (Paris: Presses Universitaires de France, 2020).

profession.²⁵⁵ Mireille Delmas-Marty defines norms, in their ideal form, as ‘models for action, models for evaluation’. She has shown that when they proliferate without clarity or binding force, they lead to a dilution of responsibilities and legal insecurity.²⁵⁶ Some of the professions I have mentioned, which proclaim their independence, have equipped themselves with common, precise, and recognized disciplinary rules, amounting to codes of ethics.²⁵⁷ This process can (or could) be an opportunity to discuss the specificity of wrongdoing within the fields of education and research.²⁵⁸

Added to this is the fact that the investigation procedure is poorly organized and therefore often perfunctory, especially since the victim does not take part; Article R 712-33 of the Code of Education states that the investigation report ‘must contain only the statement of facts’ in

²⁵⁵ Mention should be made of the efforts undertaken to create such a reference corpus: a national charter of ethics for research professions, signed by the CPU (University Presidents’ Conference) and several research organizations, and the creation of the OFIS in March 2017. However, not one of the twelve members of its Council (COFIS) in October 2020 was a legal expert. See *Charte française de déontologie des métiers de la recherche*, January 2015; Article 1110 of the French Civil Code: ‘Membership agreements contain a series of non-negotiable clauses, written in advance by one of the parties’; Corvol, p. 41.

²⁵⁶ M. Delmas-Marty, ‘Normes, formes et dogmes: Regard d’une juriste’ in *Sciences et société, les normes en question*, ed. by M. Bergadaà and others (Arles: Actes Sud, 2014), pp. 47-62.

²⁵⁷ French national regulation for lawyers to which is associated an extensive jurisprudential corpus; Collection of ethical obligations for magistrates published for the first time in 2010 by the National Council of Magistrates; Conseil national des barreaux (CNB), *Règlement intérieur national (RIN) de la profession d’avocat*, 2021.

²⁵⁸ See the stimulating article by L. Marino, ‘Repenser le droit du plagiat de la recherche’, *La Semaine Juridique*, 50 (2011), 2483-89.

addition to the observations of the prosecuting authority and the person brought before the court.²⁵⁹

Thirdly, there is no place for the victim. This is true of all disciplinary procedures as it is essential to maintain order within an organization, but the plaintiff is not necessarily completely absent. The procedure is not public (Article R 712-36 of the Code of Education). The victim receives no compensation.²⁶⁰

Finally, the decisions of the CNESER, the appeal jurisdiction for the decisions of disciplinary bodies, which is composed of academics, are poorly reasoned and lenient, even lax: 42% reduce the initial sentence, especially since only an appeal by the university chancellor can lead to a heavier sanction.²⁶¹ Yet, according to Mathieu Touzeil-Divina, ‘very few appeals are brought by a university administration (which is clearly sociologically and politically afraid of daring to oppose the disciplinary board which partly elected it)’, to which can be added the wish not to condemn one of its accused lecturers and researchers.²⁶² Mathieu

²⁵⁹ Reading the grounds for the decision of the CNESER 2/11/2015, case no. 1005, or the CE 11/09/2013, no. 362391, second recital, is a rather mind-boggling experience.

²⁶⁰ For instance, the plaintiff can be heard during a disciplinary procedure for lawyers. He is informed of the decision when the final judgment is given. The procedure is public. Above all, lawyers are not civil servants; they have individual civil and criminal professional liability.

²⁶¹ The 2019–2020 reform nevertheless obliges the CNESER to have a member of the *Conseil d’Etat* at its head, and appeals by users are directly placed under the scope of the Administrative Court. For a statistical study of the CNESER’s decisions and an interview with Mr. Zidi, its President from 1 January 2008 to 1 July 2019, see Y. Chouiter, A. Lerouge, and A. Lutzky, ‘10 ans de Cneser disciplinaire: 42% des décisions allègent la sanction de première instance’, *AEF Info, Dépêches*, 611828, 2 September 2019; Y. Chouiter, A. Lerouge, and A. Lutzky, ‘10 ans de Cneser disciplinaire: Qui sont les personnes jugées, pour quels faits et dans quels établissements?’, *AEF Info, Dépêches*, 611379, 2 September 2019.

²⁶² Article R 712-43 of the Code of Education.

Touzeil-Divina does not hesitate to call the CNESER a ‘Lenor judge (with added softener!)’.²⁶³

Consequently, when it is possible, appealing to the court system is therefore tempting, complementary, or obligatory in certain disputes which by their nature or their gravity cannot come under the sole jurisdiction of the disciplinary order. To prevent it from remaining a closed community, it may well be necessary to change French academic culture from the outside, as it is clearly struggling to change from the inside.²⁶⁴

3. The ups and downs of judicial trials

From a lawyer’s point of view, the most daunting aspect of a trial is the challenging nature of the argumentation in a highly adversarial and therefore more demanding context, in addition to the legal uncertainty; from the perspective of the client, in this case a plaintiff who is a party to the proceedings, it is the human and financial cost of an exhausting lawsuit.

It is worth emphasizing, first of all, that many situations cannot be dealt with judicially: as has been said many times, plagiarism, which is the principal offence in these procedures, is not legally a crime.²⁶⁵ Only counterfeiting is, and this merely deals with the ‘form’ of a work, which

²⁶³ M. Touzeil-Divina, ‘Université, plagiat et juge soupline (avec adoucissant!)’, *La Semaine Juridique—Édition Générale*, 35 (2013), 890.

²⁶⁴ On ‘tolerance of plagiarism’ within academic institutions, see Jean-Noël Darde’s well-researched and politically engaged online blog *Archéologie du copier-coller* (Archaeology of copy-pasting). Note that being committed to such a cause comes at a cost, as is not uncommon to be sued for defamation when denouncing fraud; J.-N. Darde, *Archéologie du ‘copier-coller’*, 2020.

²⁶⁵ H. Maurel-Indart, *Du plagiat* (Paris: Gallimard, 2011).

can pose serious problems in hard science, for instance.²⁶⁶ The notion of unfair competition and parasitic practices, a concept from case law which is used increasingly often, can be considered a palliative, however, for it focuses more on the substantial economic value and intellectual investment that may have been misappropriated by the plagiarist. But proving it is challenging for the plaintiff. This is how Guillaume was able to win the case against his co-author Nicolas, thanks to many testimonies from the scientific community bearing witness to the significant value and primacy of his work, which was copied without authorization or due credit.²⁶⁷ Other types of fraud affecting scientific integrity (modifying results, etc.) are difficult to include in ordinary law categories; fraud is essentially a tax-related notion and concerns consumer rights or criminal law, so it is difficult to apply to scientific fraud.²⁶⁸

Although positive law can address certain breaches of scientific integrity (essentially counterfeiting and parasitic practices), it is a complex matter to discuss. This is clear from the case of Béatrice Durand, instituted by Marie-Avril Roux Steinkühler, which included a subtle debate on the notion of disclosure and a meticulous examination by the Court of her requests, which my colleague carried out with great distinction. In Guillaume's case, proving his authorship was an archaeologist's task, as it required different versions of the co-authored articles reused by Nicolas under his name alone to be presented. After that, identifying which versions of the two articles were the original

²⁶⁶ Criminal and civil offence: Articles L 122-4 and L 335-2 of the Intellectual Property Code so that the plaintiff can choose between criminal or civil justice.

²⁶⁷ Paris High Court 15/12/2016 aforementioned. See definition of intellectual parasitism: Cass. com., 31/03/2015, no. 14-12391, M. X v. Sté Générale, Industrial Property no. 6, June 2015, comm. 49; J. Larrieu, 'L'étudiant plagié et le financier', *Propriété Industrielle*, 6 (2015).

²⁶⁸ Article L 441-1 of the Criminal Code: a counterfeit is not only material (forging a document); it can be intellectual (counterfeiting the truth).

ones was a job for a linguist, in order to justify the protection by copyright law that made it possible to identify an act of counterfeiting.²⁶⁹

There was also an in-depth legal debate on whether a counterfeiting offence could even be possible between two co-authors. The court considered that there had been wrongdoing, but only between competing co-owners (one of whom had parasitized the other), and that there had not been any counterfeiting. The grievance was nevertheless maintained against the plagiarist's publisher, who did not contribute to the creation of the work.²⁷⁰

For non-specialists, this debate may seem convoluted, but it gives an idea of the profusion of obstacles and means that can be used: time limitation, inadmissibility, exceptions, etc., not to mention Nicolas's shameless requests to have Guillaume condemned, accusing him, as is very often the case, of being a plagiarist himself. Discussions can be liberating but they can also increase the violence suffered by victims. Moreover, the university where the protagonists work is necessarily aware of the dispute, because the civil procedure is based on the parties' evidence, so testimonies quickly become necessary, including the 'customary' evidence, whose purpose is to enable the court to understand the rules and issues related to a specific profession.

The criminal offence of counterfeiting can also be used, and should be reserved for exceptional cases. A criminal trial is long and stigmatizing, and it is no longer the purview of the parties concerned, because it is filed by society against a defendant. It requires adding a

²⁶⁹ We obtained testimony from a university colleague who was a professor of linguistics.

²⁷⁰ With regard to civil counterfeiting, the publisher's good faith, though not contested in this instance, was ineffective; the publisher was condemned *in solidum*.

moral element, namely a guilty mind, and gives the benefit of the doubt.²⁷¹

Even when they end in a victory—and what if it they do not?—lawsuits have a human cost (they last from two to ten years), a financial cost (at least 15,000 euros in legal fees), and a professional cost. Guillaume saw some of his colleagues turn their backs on him, starting with the chancellor of U University, where he is a lecturer and researcher. When asked what help he could provide to resolve what was at the time in the pre-litigation stage, the chancellor dismissed the affair, considering it to be certain to fail, and severely warned Guillaume that he had to respect his ‘duty of loyalty’ (*sic*).

Compensation does exist, but in such cases it is difficult to assess, so the sum is always a flat rate, often merely symbolic (the damages rarely exceed 10,000 euros), because the injury is considered by the judge to be essentially moral in nature.

Although powerful, regular justice appears to be quite unsuitable for tackling ‘intellectual delinquency’ in academic circles, due to inadequate normative categories, arduous and sometimes excessively violent proceedings, and judges who are unable to compensate victims for the specific injuries they have suffered, and still less the scientific community for its injuries.²⁷² Victims are rarely satisfied by the compensation, because their true goal is to be recognized by their peers for their legitimate contribution to research and knowledge. Some of them even consider the injury to be above all a collective one.²⁷³ They all lament the failure of academic institutions to act, which forces them

²⁷¹ For instance, ten years after the fact, the Court discharged the defendant on the grounds of the benefit of the doubt (CA Paris Pôle 5, Ch. 12, 23/09/2015 no. 14/07720).

²⁷² M. Bergadaà, *Le plagiat académique: Comprendre pour agir* (Paris: Editions L’Harmattan, 2015).

²⁷³ G. J. Guglielmi, ‘Plagier une thèse de droit privé n’est pas seulement une affaire privée’ *Drôle d’En-Droit*, 11 October 2010.

to resort to the law and sometimes fails to duly acknowledge judgments rendered.²⁷⁴ Guillaume L. informed the chancellor of the university where Nicolas still teaches of the verdict, and the rector as well. Neither of them even answered.

Once again, we return to the academic institution whose responsibility has to be called into question, if need be legally. Administrative jurisprudence seems rare in this regard. In a decision of 27 July 2005, the state council agreed to hear Mr. X's complaint against University of Bourgogne for tolerating the plagiarism of his thesis, but then dismissed it.²⁷⁵ The length of disciplinary procedures, though often denounced, remains unavoidable—in this case three years and two months for proceedings in the court of first instance.²⁷⁶

It is tempting, and even beneficial, to force an institution to face up to its own responsibilities. For this reason, Thomas Clay, interim chancellor of Panthéon Sorbonne University and legal expert, when faced with a spectacular case of plagiarism, referred it to the Paris Prosecutor in September 2020, in particular pursuant to Article 40 of the Code of Criminal Procedure.²⁷⁷ This is the subject of Jean-Baptiste Soufron's chapter in this book.

²⁷⁴ M. Battaglia, 'Le long parcours d'une plagiée pour faire reconnaître le "pillage" de sa thèse, *Le Monde*, 10 November 2010; L. Fessard, 'Le plagiat de thèse reste un tabou à l'université', *Sauvons l'Université!*, 4 October 2010.

²⁷⁵ CE, 27/07/2005 no. 265106.

²⁷⁶ CE, 23/12/2015 no. 385172.

²⁷⁷ Clay co-authored a book on alternative dispute resolution; Cadiet and Clay. Article 40 of the Code reads 'Any constituted authority, public officer or civil servant who, in the performance of his duties, becomes aware of a crime or misdemeanor, is obliged to notify the public prosecutor without delay and submit all the information, reports and acts relating thereto.'

4. A third approach?

Are more peaceful solutions possible? Alternative dispute resolution has been professionalized since 2010 in our civilly oriented procedure, mainly in the form of mediation, either judiciary (ordered by a judge, with both parties' consent), or spontaneously organized before the trial by the parties. Legal experts specializing in intellectual property have been trained in mediation techniques and remain completely independent of the parties, who are accompanied by their lawyers, who are also specialists.²⁷⁸ A mediator may charge 300 euros per hour, excluding VAT, but there are three significant advantages: pragmatism, discretion, and most of all, direct human contact between the defendant and the victim, which explains why certain outcomes exceed expectations, sometimes spectacularly.

Academic institutions might imagine welcoming such a tool, but mediation is not second-rate justice.²⁷⁹ Any lawyer knows by experience that mediation cannot succeed without a clear and common definition of norms. Indeed, agreeing to negotiate is the result of accurate knowledge of the legal risk incurred, which also means working with legally trained, independent, and properly paid professionals.

Ordinary law justice and disciplinary academic institutions are complementary, but it is generally felt that the former often supersedes the latter, with its advantages and disadvantages. Legal culture and legal rules must evolve within academia, not necessarily through disputes, but assuredly in a professional manner, to protect people who create and serve the knowledge they pass on.

²⁷⁸ For instance within the CMAP (Paris Centre for Mediation and Arbitration) or the Association des Médiateurs Européens.

²⁷⁹ See the Institute of Research and Action on Fraud and Plagiarism in Academia's (IRAFPA) work on this matter.

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FRENCH AND GERMAN JUDICIAL APPROACHES TO PLAGIARISM IN RESEARCH

Marie-Avril Roux Steinkühler

Abstract

In Germany, the courts are simply not called upon to judge cases of plagiarism. It is the research institutes and, in case of appeal, the administrative courts that are competent. This is because German research has developed solid tools for defining and punishing plagiarism, which the institutes must respect. These rules cover infringements much broader than copyright, including 'intelligent' plagiarism, theft of ideas, paraphrasing and other misquotes. Prosecution is not a matter for the parties but for society. What German institutions most often sanction by withdrawing the title of doctor is the deception of the researcher, the lack of independence of his or her research work and the resulting lack of progress in research. In France, the university does not challenge or sanction cases of plagiarism. Victims, tired of not being heard or afraid of seeing their case buried, turn to the courts. Because historically based essentially on copyright, the French courts only manage to award damages and punish copy-pasting. While new legal grounds such as parasitism are developing, the costs, burdens and hazards of the procedures limit the number of claims.*

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1. Introduction

First of all, let us avoid a misunderstanding: plagiarism does not exist in law, either in France or in Germany. Both French and German law speak of counterfeiting. Instead, it is the moral and academic rules that offer different definitions of plagiarism, one of the forms of infringement of the ethics of scientific research. The only common point between our legal approaches ends here.²⁸⁰

Between the time when Béatrice Durand discovered troubling similarities with her work in a book in 2012 and the French *Cour de Cassation* (supreme court) ruling confirming the infringement, it took some eight years of academic approaches, then out-of-court approaches, and finally legal proceedings. The legal basis invoked is counterfeiting, which occurs, to summarize, when an original text is copied identically or quasi-identically without delimiting it or noting its source, and without the author's agreement. The sanctions imposed were damages and publication measures. No proceedings were initiated by the university.²⁸¹

On the other side of the Rhein, in 2013, Frau Dr. X was the subject of plagiarism allegations on the website VroniPlag. That same year, the university opened a commission of inquiry and then withdrew her doctoral degree for deception and plagiarism, mainly due to paraphrasing and quoting insufficient sources. Frau X. appealed to the administrative court to contest the decision, which was upheld. No civil

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²⁸⁰ This article draws in particular on a study by the author of the two legal approaches: M.-A. Roux Steinkühler, 'Le plagiat dans la recherche scientifique: approche comparée France/Allemagne', *Revue Francophone de la Propriété Intellectuelle*, 12 (2021), 61-82.

²⁸¹ According to our current information.

court proceedings, no damages: the sanction is the withdrawal of the title of doctor.

In Germany, the control by the academic authorities operates at full capacity and makes it possible to apprehend offenses to a much greater extent, particularly in cases of 'clever' plagiarism, theft of ideas, paraphrasing, and other misquotations. What German institutions most often sanction by withdrawing the title is the researcher's deception, the lack of independence of his research work, and the consequent lack of progress in research.

In France, plagiarism is still a private matter that is dealt with by the courts, as universities fail to question themselves and to penalize plagiarism cases. Victims, tired of not being heard or fearing that their case will be buried, turn to the courts. In Germany, however, the courts simply never hear of them. It is the research institute and, in the event of an appeal, the administrative courts that have jurisdiction. This is because the German research system has solid tools for defining and sanctioning plagiarism, which the institutes are obliged to respect. Prosecution of plagiarism is not a matter for the parties alone but a societal issue.

The consequences are significant. Because historically they have based themselves essentially on copyright and counterfeiting, the French courts certainly protect the plagiarized author, but only manage to punish cases of copy-paste or quasi-copy-paste. Although new legal bases are being developed, the costs, cumbersome nature, and hazards of the proceedings limit the number of claims.

The prosecution of plagiarism has so far remained untouched by European harmonization...

2. In Germany, no infringement proceedings before the courts: universities and research centers decide

In cases of plagiarism in Germany, researchers do not go to court. It is true that German copyright law is much more tolerant—which is disconcerting for a French lawyer—of the use, even extensive, of previous works for research purposes. Most importantly, though, the universities and research institutes are very vigilant and play an active role in supervising and sanctioning researchers.²⁸² Some historical background is necessary here.

2.1 Historical background: First step

We must go back to the 1990s, and the impact of the Herrmann scandal and the ‘Self-Control in Science’ operation launched by the German Research Foundation (DFG).²⁸³

In the 1990s, following a data manipulation scandal featuring two stars of German cancer research, Professors Friedhelm Herrmann and Marion Brach, the DFG, an independent, self-managed supervisory authority for German research laboratories, universities, scientific associations, and academies of science, which distributes research grants, set up the ‘Self-Control in Science’ commission to analyze the origins of dishonesty in the research system and formulate

²⁸² This chapter owes much to Professor Volker Rieble, author of a book on plagiarism in research and the failure of the system, and Dr Julian Waiblinger, author of a very thorough thesis on plagiarism in research, and their very thoughtful explanations: V. Rieble, *Das Wissenschaftsplagiat: Vom Versagen eines Systems* (Frankfurt am Main: Klostermann, 2010); J. Waiblinger, *‘Plagiat’ in der Wissenschaft: Zum Schutz wissenschaftlicher Schriftwerke im Urheber- und Wissenschaftsrecht* (Baden-Baden: Nomos, 2012). We thank them.

²⁸³ H. Wormer, ‘Herrmann, docteur ès fraudes. Ce cancérologue allemand réputé falsifie depuis quinze ans ses publications. Un “Tchernobyl de la science”, selon la presse outre-Rhin’, *Libération*, 26 October 1999.

recommendations to ensure self-control—the key word—in research.²⁸⁴ In 1998 and again in 2019, the DFG published sixteen and then nineteen recommendations for research centers.²⁸⁵

Those recommendations set out six fundamental rules of good practice, followed by eleven rules describing the essential steps that must be taken to ensure the quality of scientific work throughout the research process, and ending with two guidelines that provide for a procedure in the event of non-compliance, thereby establishing the sacrosanct principle of self-monitoring by research institutes. The idea was that researchers, institutes, and the research community should be responsible for this control, so that they themselves could guarantee that their research was trustworthy. The research institutes were invited to formulate ‘rules of good research practice’, which would be communicated to their members and would be binding on them.

The first recommendation establishes the obligation to ‘work *lege artis*, to maintain strict honesty in attributing one’s own contributions and those of others’.²⁸⁶ Guideline 18 requires the establishment of investigating bodies in each research institute, mainly ombudspersons and investigating committees. Guideline 19 calls on research institutes to establish procedures for dealing with misconduct, starting with a definition of the facts of misconduct ‘on the basis of a sufficient legal foundation’—specifically citing plagiarism—followed by rapid procedural rules and, finally, proportionate measures and sanctions to be taken in the event of established scientific misconduct. Procedural rules will then be defined by the Research Foundation to deal with frauds within its remit, which expressly include ‘using others’ content without

²⁸⁴ *Selbstkontrolle in der Wissenschaft*.

²⁸⁵ Deutsche Forschungsgemeinschaft, *Leitlinien zur Sicherung guter wissenschaftlicher Praxis—Kodex* (Bonn: Deutsche Forschungsgemeinschaft, 2019), p. 31.

²⁸⁶ DFG Guidelines 1 and 7 provide for the citation of sources: Deutsche Forschungsgemeinschaft, *Leitlinien*, pp. 9 and 14.

indicating the source (plagiarism), using others' research approaches and ideas (idea theft)'.²⁸⁷

In the wake of this, the DFG itself set up an independent committee to act as a 'research mediator'²⁸⁸ and adviser. This committee can be contacted by any institution or researcher in the event of doubt about scientific conduct or a decision taken by a supervisory body. The ombuds committee investigates the case confidentially and, if it considers it necessary, refers the matter to the relevant authority of the research institution concerned.²⁸⁹

But above all, these measures came with a stick: the DFG made the allocation of research grants dependent on the implementation of the requested measures before mid-2002.²⁹⁰ Needless to say, the universities, research centers, and other institutes complied.

This 'self-monitoring operation' was accompanied by two other initiatives, making it possible to complete a corpus of texts which should then support the various research institutions in setting up their own rules.

The rules of procedure established in 1997 by the Max-Planck-Gesellschaft in cases of suspected scientific misconduct are very instructive. The procedure consists of two stages, the reverse of the French disciplinary procedure: investigation followed by a research committee, which, if necessary, forwards the file to the president with a

²⁸⁷ Deutsche Forschungsgemeinschaft, *Rules of Procedure for Dealing with Scientific Misconduct*, 2 July 2019, p. 3.

²⁸⁸ Ombudsman für die Wissenschaft, *Jahresbericht 2019 an den Senat der DFG und die Öffentlichkeit* (Bonn: Ombudsman für die Wissenschaft, 2019), p. 13.

²⁸⁹ Plagiarism cases accounted for an average of 10% of cases up to 2010 compared to 16% in 2019 and 18% in 2020: Ombudsman für die Wissenschaft, *Jahresbericht 2019*, pp. 13 and 15; Ombudsman für die Wissenschaft, *Jahresbericht 2020 an den Senat der DFG und die Öffentlichkeit* (Bonn: Ombudsman für die Wissenschaft, 2020), p. 14.

²⁹⁰ (Waiblinger, 2012; Deutsche Forschungsgemeinschaft, *Leitlinien*.

proposal for prosecution.²⁹¹ Appendix 1 of the regulations sets out a ‘catalogue of behaviors to be considered as scientific breaches’. They include ‘violations of intellectual property rights’, which, after the mention of plagiarism, go well beyond the definition of counterfeiting to include theft of ideas by exploiting research methods and ideas, particularly as an evaluator, unfounded presumption of scientific authorship, distortion of content, and unauthorized publication or disclosure by the author to third parties.²⁹²

Not to be outdone, the Conference of University Rectors also published its own text, very much inspired by that of the Max-Planck-Gesellschaft, particularly as regards plagiarism.²⁹³

2.2 The second stage: The 2010s

At this point, a new wave of scandals broke out, this time political. Plagiarism became a societal issue.

Let us move on to February 2011, when Karl-Theodor zu Guttenberg, a young rising star of the ruling CSU/CDU party, Minister of Economy and then of Defense, was accused of plagiarism by the German press.²⁹⁴ A collaborative website was immediately created which, in a few weeks, listed no fewer than 1,200 instances of plagiarism, often on a large scale, since entire pages had been copied or paraphrased.²⁹⁵ The minister resigned; the university withdrew his title; and three months later, a commission of inquiry at the University of

²⁹¹ In France, Articles R 712-9 to R 712-46 of the Education Code.

²⁹² Max-Planck-Gesellschaft, *Verfahrensordnung bei Verdacht auf wissenschaftliches Fehlverhalten*, 24 November 2000, p. 4.

²⁹³ HRK Hochschulrektorenkonferenz, *Zum Umgang mit wissenschaftlichem Fehlverhalten in den Hochschulen* (Bonn: HRK Hochschulrektorenkonferenz, 1998), p. 4.

²⁹⁴ *L'Express*, ‘Le ministre de la Défense allemand accusé de plagiat’, *L'Express*, 18 February 2011.

²⁹⁵ WIKIA.org, *GuttenPlag Wiki*, 2012.

Bayreuth, to which he belonged, confirmed the plagiarism. The report, which did not hesitate to rely on press articles and the collaborative website, contained a list of forty-eight passages that Guttenberg had copied word for word. A serious violation of scientific standards and intentional deception were noted. At the same time, about 200 criminal proceedings for infringement were initiated, which led to the identification of twenty-three copyright violations. Here again, one can see the dichotomy between the comparisons made by the first analysts—although they were not professionals—and the number of problematic passages identified by the university, and the extent to which copyright was finally reduced to negligible importance, since the judge only characterized twenty-three violations.

In the following years, several other ministers and prominent politicians were accused of plagiarism, had their academic titles withdrawn, and resigned. The collaborative work of researching plagiarism continued and other websites were created to research and prosecute plagiarists or to offer proofreading services before submission.²⁹⁶ In Germany, which does not have a system of *grandes écoles* like France, university degrees are fundamentally important and especially the title of doctor, which is even used in everyday life.²⁹⁷ Moreover, about 29,000 doctorates are granted each year in Germany, many more than in other European countries.²⁹⁸

²⁹⁶ Collaborative website: <https://vroniplag.wikia.org/de/wiki/Home>; private site: <https://vroniplag.de/>.

²⁹⁷ It may be indicated on a person's identification card: Bundesministerium der Justiz und für Verbraucherschutz, *Gesetz über Personalausweise und den elektronischen Identitätsnachweis (Personalausweisgesetz—PauswG) § 9 Ausstellung des Ausweises*, 2021.

²⁹⁸ Bundesministerium für Bildung und Forschung, *Infos für internationale Doktoranden—Research in Germany*, 2021.

The definition of plagiarism was clarified and extended by doctrine, jurisprudence, and... collaborative websites.²⁹⁹ This expanded definition made it possible to cover more breaches of the attribution of authorship of a work than is possible under French or German copyright law, which only punishes, for the record, the copy-paste or virtual copying of an original work.

Scientific plagiarism is therefore identified in case of:

- counterfeiting in the sense of copyright, that is, copying and pasting of an original prior work;
- identical or almost identical repetition of sentences or parts of sentences, even unoriginal ones, not indicated as such and without reference to the author;
- paraphrasing without citing the author of the original sources;
- plagiarism by translation, without citing the sources;
- ‘pawn sacrifice’, as defined by Benjamin Lahusen, in reference to the game of chess, which consists in recognizing the authorship of a previous expression or concept, thus giving the impression of being loyal and respectable, all the better to appropriate much more substantial portions of that person’s thought, while keeping the borrowing secret.³⁰⁰

Self-plagiarism is also condemned, when an author repeatedly reuses her own work without quoting it, as well as bad or imperfect quotations.

2.3 A few examples

A researcher was the author of a thesis on the planning of the urban night landscape for which she was granted the title of doctor of

²⁹⁹ https://vroniplag.wikia.org/de/wiki/VroniPlag_Wiki:Grundlagen/Plagiatskategorien.

³⁰⁰ B. Lahusen, ‘Goldene Zeiten: Anmerkungen zu Hans-Peter Schwintowski, Juristische Methodenlehre [2005]’, *Kritische Justiz*, 4 (2006), 419-38, p. 406; some remarks on Hans-Peter Schwintowski’s legal methodology.

engineering with honors in 2005 by the University of Stuttgart.³⁰¹ In May 2013, a professor suspected her work of plagiarism, and an expert analysis was conducted, which concluded that ninety-one passages constituted plagiarism. Less than a year later, the university withdrew her doctoral degree. The researcher appealed to the administrative court, which rejected her appeal in 2018. The judgment was confirmed by the Administrative Court of Appeal in Mannheim in 2020.

The decision relied on the provisions of paragraph 16 of the doctoral regulations of the University of Stuttgart, whereby a title can be withdrawn if it subsequently becomes apparent that it was obtained by deception: in particular, if the doctoral student used previous work without indicating the source to such an extent that the thesis can no longer be considered as resulting from independent research work.³⁰² It might certainly be a question of negligence, but the more numerous and hidden the repetitions are, the more likely it is that deception is

³⁰¹ VGH Mannheim (9. Senat), Judgment from 07.07.2020—VGH 9 S 2809/19 Beck-online.

³⁰² Universität Stuttgart, *Promotionsordnung der Universität Stuttgart*, 22 February 2016. Made under § 3, paragraph 5. of the Baden-Württemberg Universities Law: ‘(5) All persons working at the university as well as students are bound to scientific honesty. To this end, the generally accepted principles of good scientific practice must be respected. In particular, this obligation is violated when false statements are made intentionally or through gross negligence in a scientific context, when the intellectual property of others is infringed or when the research activities of third parties are significantly obstructed.’ According to § 38, ‘the doctorate serves as proof of the ability to carry out proper scientific work and is based on an independent scientific document (thesis) and an oral examination, the subject of which includes the thesis’: *Gesetz über die Hochschulen in Baden-Württemberg (Landeshochschulgesetz—LHG)*, 2230-1 (2005).

involved. For—and this is an element mentioned in many texts on research—the work must ‘advance science’.³⁰³

The assessment of the independence of the work is based on the quantitative and qualitative ratio of the allegedly plagiarized passages to the work as a whole. Each allegation of plagiarism is examined. In this case, thirty-six plagiarized passages were qualified as type 1 (copy-paste with no source mentioned). For half of them, the source was cited but only a few paragraphs before or afterward—according to the ‘pawn sacrifice’ method—thus misleading the reader about the extent of the borrowing from the earlier work. For the other half, the borrowing was completely silent, which could not be due to negligence.

The Court of Appeal then noted the existence of forty-nine passages of type 2 plagiarism, consisting of paraphrases under which the source preceded by *cf.* was sometimes indicated. The passages were not clearly delimited, and this procedure gave the inaccurate impression that the whole line of reasoning was developed independently by the author.

Out of the 247 pages of the work, eighty-five passages were therefore considered to be plagiarized, which is too high a proportion.

The judgment also noted that these repetitions constituted a deception concerning the allegedly independent nature of the candidate’s work, to which she had nevertheless attested. Every student in Germany must sign a certificate guaranteeing that the work was carried out independently and the rules of research were respected. The judges went on to expressly reject the argument that there was not (always) counterfeiting in the sense of copyright law, because what was important in this case was whether the researcher had carried out scientific work. It was also irrelevant that the thesis was written at a time

³⁰³ ‘The thesis must meet scientific standards, advance science and be an independent achievement of the candidate’, paragraph 2 (1) of the regulations on doctorates of the university of Stuttgart, <https://www.uni-stuttgart.de/forschung/nachwuchs/document/promotionsordnung-2016.pdf>.

when the rules of citation and good scientific practice were not determined as they are today.

This decision—among many others similarly argued—shows how fundamental the two interdependent criteria of independent work and advancing research are in assessing the sanction for plagiarism. Indeed, commissions and judges are willing to overlook a few repetitions or misquotations, as long as the rest of the work demonstrates such progress.

Another decision is also instructive. It was initiated by a study by the VroniPlag website and was handed down by the Berlin Administrative Court, confirming the withdrawal of the doctoral title from a researcher in film history.³⁰⁴

First, it dealt with the case of intermediate sources. It expressly sanctioned citations that consisted in claiming to have consulted a primary source, while the information was borrowed without citation from intermediate works that had commented on the primary source.

This decision, which in several instances pointed to plagiarism by translation, also criticized the use of the pawn sacrifice method: certain authors were indeed cited at the beginning of a chapter, but this was done to summarize them and remove the impression that their further work would in fact be copied.

As we can see, it is clearly the violation of the right of authorship that is sanctioned, not out of a concern like that of copyright—to protect the personality of the original author—but rather to protect the progress and credibility of independent research.

³⁰⁴ Verwaltungsgericht Berlin, 21 February 2020.

3. In France, the classic path of reparations through copyright protection

3.1. Historical background

The establishment of academic standards, controls, and sanctions in France is even more recent than in Germany. And it must be noted, first, that this body of rules itself is not always fully developed and precise, and therefore it does not have the necessary solid foundations. But above all, it is rarely applied. The impulse and the will to do so are seriously lacking: first of all, the political will, then the will of the research world itself, and finally the will of the public, which is less interested in the value of doctoral degrees than in Germany.

The November 2017 Letter from the Legal Affairs Directorate of the Ministry of National Education and the Ministry of Higher Education, Research and Innovation is very disappointing but instructive in this regard.³⁰⁵ Plagiarism is not defined therein as anything other than copyright infringement alone, and there is no mention of the other breaches described above, such as theft of ideas. The prosecutions described are primarily criminal and judicial. In practice, plagiarism cases submitted to the National Council for Higher Education and Research each year can be counted on the fingers of one hand.

And if the research institutions concerned do not react to a case of plagiarism, the only possibility left for the authors concerned is to turn to the courts. The classic basis that will then be invoked is the infringement of copyright. France remains attached to copyright and to its defense. A new legal basis was developed only a few years ago, that of parasitism.³⁰⁶

³⁰⁵ Ministère de l'Éducation Nationale and Ministère de l'Enseignement Supérieur, de la Recherche et de l'Innovation, *Lettre d'Information Juridique* 200, November 2017, p. 14 and following.

³⁰⁶ On this subject, see the article by Catherine de Gourcuff, 'Les lenteurs et les incertitudes de la justice en matière d'intégrité académique', in *L'urgence de*

3.2. A significant example: The case of Béatrice Durand against *M and Éditions Classiques Garnier*³⁰⁷

When she came to consult me in 2013, my client, Béatrice Durand, a post-graduate doctor of literature and *Privatdozentin* (private lecturer) at the Freie Universität Berlin (FU), *agrégée* in modern languages, and alumna of the École Normale Supérieure, explained to me that in 2003 she was authorized to conduct research by Martin Luther University in Halle-Wittenberg, to which she submitted a habilitation thesis (special post-doctoral thesis) entitled *L'origine au laboratoire de la fiction, histoire et fonction d'isolement enfantin dans l'élaboration des concepts de nature et de culture* ('The origin in the laboratory of the fiction, history, and function of childish isolation in the development of the concepts of nature and culture'). In it, she identified experiences of children's isolation ('wild children') as a recurrent philosophical and literary motif and described them systematically from Antiquity to the twentieth century. Her objective was to show how these experiences, as reported in novels or philosophical literature, whether real or fictional, especially in the eighteenth century, contributed to explain the specific characteristics of the human race and to distinguish between nature and culture. For the purposes of her defense, her unpublished thesis was submitted to the habilitation jury only, as library deposit is reserved for published works. My client then also applied in France for authorization to seek employment as a university professor. In September 2005, she sent an administrative and scientific file to the National Council of Universities, which included the above-mentioned research work. The National Council of Universities accepted her application and qualified her as a professor in spring 2006.

l'intégrité académique, ed. by M. Bergadaà and P. Peixoto (Caen: Editions EMS, 2021), pp. 213-24.

³⁰⁷ Tribunal de grande instance de Paris, 19 September 2019, no. 17/17453; Cour d'appel de Paris, Pôle 5—2, 23 October 2015.

In 2012, she decided to publish her work, and began to update it. She then discovered a work published in 2010 by a certain M, professor of literature at the Sorbonne University entitled *Éducatons négatives, fictions d'expérimentation pédagogique au XVIIIe siècle* ('Negative educations: Fictions of pedagogical experimentation in the eighteenth century'), which included many troubling similarities, even identical passages, with her unpublished thesis.

It was clear that, even when dealing with similar subjects, these common features could not be the result of pure chance or necessity. So, how was it possible that this other professor had gotten his hands on an unpublished work?

At my request, my client drew up a comparative table of the repetitions, identical passages, and similarities that she felt she had found in M's work. She noted some seventy such instances, of which I retained thirty-nine.

• The university was not interested in her requests

Béatrice Durand then naturally decided to turn to the university; she first consulted a few people about the situation. She was advised not to pursue the matter—the usual unfortunate *omertà*—and some of the people she consulted went so far as to deny that it was obvious that certain passages had been copied. The university approach seemed to be a dead end. The only thing left to do was to refer the matter to the judge, who would be obliged to rule on it. What kind of judge? Counterfeiting is a criminal offense, but criminal judges are not very sensitive to these kinds of cases.³⁰⁸ The idea in any case, was not to pillory M but to see

³⁰⁸ Counterfeiting is provided for and sanctioned in France by Article L335-2 of the Intellectual Property Code, whereby 'Any edition of writings, musical compositions, drawings, paintings or other printed or engraved production made in whole or in part regardless of the laws and regulations governing the ownership of authors shall constitute an infringement. Any infringement shall constitute an offence'. It is a criminal offense, punishable by three years' imprisonment and a fine of 300,000 euros.

Béatrice Durand's authorship restored, so a civil judge was preferred. On what basis? Since we were dealing with two literary authors, and since some repetitions were obvious, copyright was the basis that was chosen.

• Attempts to reach an out-of-court solution failed

In accordance with the deontological rules of French lawyers, I then approached M and his publisher to seek an out-of-court solution, consisting essentially in having Béatrice Durand's authorship of the work restored. In a voluminous letter, M answered that our allegations were scientifically and legally unfounded. But above all, he revealed how he had learned about my client's research, while he himself was finishing his own habilitation thesis. Béatrice Durand's work had been given to him by one of his colleagues serving on the National Council of Universities, who knew that her research topics were similar.

• The case went to court

After a long hesitation, Béatrice Durand decided to go to court. A person who complains of a copyright infringement must prove that she is the author of an original work (1), which has been formally reproduced in whole or in part without her authorization and without legal authorization (2). Damages and other remedies may then be awarded to compensate for the infringement of the author's economic and moral rights (3).

An earlier original work, not just an idea, even if it is original...

Copyright confers a monopoly of exploitation to the author of a so-called original work. An original work is defined not by the Intellectual Property Code but by doctrine and jurisprudence as a creation that is the reflection of its author's personality. Article L112-2 of the Intellectual Property Code cites examples of work, including scientific writings.

By contrast, ideas are not protectable, they are said to be 'free to roam'.³⁰⁹ Thus, it is not punishable under copyright law to work on the

³⁰⁹ In French, *de libre parcours*, in the words of Professor Henri Desbois.

same topics, to use the same sources or biographical data, to quote the same extracts, or to develop a similar idea or the same line of reasoning on a subject, even if it is similar or identical—which the rules of research ethics see differently. What is punishable is the repetition of the wording, provided that it is original. Copyright law is formalist in nature.

In practice, this means that the following are excluded from copyright protection: relations of facts known to all—or at least to the research community in question; commonplace or customary phrases in the field; widely used expressions; the exploitation of the same raw data; common words relating to similar subjects in the so-called public domain; an identical combination, presentation, or plan of ideas, which is unavoidable in the field in question; and necessary formulations, even complex ones.

This also excludes mathematical formulae and certain inventions, as well as most graphs, diagrams, and other raw data representations. But their explanations in words may be protected.

In this case, the judges recognized that Béatrice Durand's habilitation thesis as a whole was an original work protected by copyright prior to M's book, which was published later.

... formally reproduced in whole or in part: each passage must be original and reproduced identically or almost identically

If entire passages are reprinted without quoting their author and without distinguishing them from the rest of the text by quotation marks, for example, the case is generally heard. More often, it is simply extracts, sentences, or parts of sentences from an earlier text that are borrowed without being identified or the source being given. The defendant's strategy—always similar in the case of infringement—will be threefold: first, he will endeavor to trivialize the allegedly infringing work; then to cut up, divide, and reduce the passages taken from the original work into a multitude of expressions—as many small subsets as

possible; and finally, to find prior works that are close or similar to all these extracts.

The aim of trivialization is to make the judge say that the passages in question in the so-called original work are not a creative work and do not meet the condition of originality. In this case, M therefore endeavored to demonstrate, for each passage said to be counterfeit, that Béatrice Durand had merely mentioned elements from pre-existing texts, arranged ideas freely, and used commonplace expressions, while he himself had provided a rich, well-developed analysis. Since both works were works of philology, the argument was specious. This trivialization also involved statements that disparaged the first work, in order to show that the second study was more relevant and went far beyond it.

The simplest way to do this is to divide the offending passages into small portions, as this facilitates the third stage, which is the search for earlier instances. It is obviously easier to find an identical expression or image in the mass of previous writings, especially on the same subject. And databases and digital searches make this work considerably easier. It is then up to the judge to characterize a given passage as original or unoriginal and thus to distinguish between those that are worthy of protection and those that are not. If a passage is not original, there can be no conviction since there is no infringement of copyright.

If the borrowed passage is original, then it must be compared with the allegedly infringing work. If the borrowed passage is identical, it will qualify as infringement. If it is slightly modified, the judge may consider that there is no infringement. This is because what is reproduced is an idea, and copyright protects the form, even if the repetitions are very disturbing, even if the flow of thought is similar, even if it seems difficult to imagine that the similarities are due to chance and necessity alone. Nevertheless, copyright is restricted to this point. Of the sixty or so passages that my client considered to be

borrowings, we only invoked thirty-nine in the proceedings, and the judges finally found only nine to be infringing.

Compensation for infringement of the author's moral rights

M and his publisher were sentenced in the court of first instance and on appeal to pay my client damages for not having cited her name, which constitutes a violation of one of her moral rights recognized by article L121-1 of the Intellectual Property Code: her right to authorship.

My client was also awarded damages for the violation of her right of disclosure. Both the court of first instance and the Court of Appeal, which upheld the judgment, ruled that her habilitation thesis was clearly unpublished, and that by reprinting passages from this unpublished thesis in his work, M had violated the right of disclosure, which belongs solely to the author.³¹⁰ The exception concerning short quotations, which M could have benefited from in a few—rare—cases, therefore could not be invoked.³¹¹

In this sense, the decisions rendered in this case are particularly important for the academic world because they stated for a fact, on one hand, that habilitation theses, unlike doctoral theses, are works that remain confidential until their author decides to publish them. It does not matter whether the thesis defense is open to the public, whether the work is subsequently mentioned in some article or other, or even presented orally at a conference. A habilitation thesis is unpublished. Furthermore, they stated that the deliberations and files submitted to the National Council of Universities in France are confidential.

³¹⁰ Article L121-2 of the Intellectual Property Code: 'The author alone shall have the right to divulge his work. He shall determine the method of disclosure and shall fix the conditions thereof, subject to Article L132-24.'

³¹¹ Article L122-5 of the Intellectual Property Code authorizes 'Once a work has been disclosed... on condition that the name of the author and the source are clearly stated... analyses and short quotations justified by the critical, polemic, educational, scientific or informatory nature of the work in which they are incorporated.'

4. In conclusion: toward a European debate?

The advantages of bringing a case to court are clear: the assurance of being judged by an impartial judge, the awarding of damages, if necessary, and publication measures and recognition of the victim's rights. However, the use of copyright alone limits the possible sentence, because copyright does not cover 'clever' plagiarism, particularly paraphrasing. Jurisprudence is therefore relying more and more on the concept of parasitism. This legal basis, which is still in its infancy, has the advantage of protecting the author in cases where copyright does not. However, its implementation presents other difficulties, it remains subject to judicial hazards, and the costs are significant. In any case, these are always *inter pares* proceedings, which implies having to take one of one's peers to court. The decision is not easy and risks isolating the plaintiff, who is also indirectly challenging the institution that failed to defend her. In both cases, however, these procedures have the advantage of restoring the rights of the plagiarized author.

In Germany, by contrast, although laboratories and research institutes monitor research ethics actively, the victims are deprived of their reparations in a way. They are not compensated, nor do they obtain publication measures. Their best recompense will be to see the plagiarist be struck off the list of doctorate holders and perhaps therefore of competing researchers. Is that enough? In any case, they do not go to court to seek reparation for their damages. There are two possible explanations: the institutional penalty seems strong enough to be satisfactory; and since German copyright law is more permissive with regard to reproductions than French law, and since the notion of parasitism does not exist, going to court seems pointless.

In any case, time limits are much shorter in Germany, which is a fundamental condition, both for victims and for plagiarists.

At a time when research is largely international and pan-European, these differences are hard to understand. A common basis, drawn from these two systems, could exist, which:

- is based on a precise structuring corpus, which must be legal, defining:
 - first and foremost, the various possible acts of plagiarism, ranging from copyright infringement to misquotation, because as long as practices are not defined precisely and in a harmonized manner, no serious battle can be waged;³¹²
 - the procedures—at least in their broad outlines—to be followed in the event of suspected fraud, preserving the anonymity of whistleblowers and imposing an average processing time;³¹³
 - sanctions, or at least their principle and types;
 - supplemented by recommendations for internal compliance by research institutes;

³¹² Such a definition does not appear in the Singapore Statement on Research Integrity: World Conferences on Research Integrity, *Singapore Statement on Research Integrity*, 22 September 2010. Nor does it appear in the *Charte française de déontologie des métiers de la recherche*, January 2015. The CNRS Guide to Promoting Research with Integrity and Responsibility of September 2014 does define some lines of thought, as does the European Code of conduct for Research Integrity published by the ESF in 2010, but these are general descriptions: CNRS, *Promouvoir une recherche intègre et responsable—Un guide*, July 2014; ALLEA—All European Academies, *The European Code of Conduct for Research Integrity* (Berlin: ALLEA—All European Academies, 2017).

³¹³ In France, for example, such a time limit is imposed on the National Institute of Industrial Property in the event of opposition to a trademark.

- takes into account the victims, so that they are not only heard but their damage is repaired simply and rapidly, without obliging them to start a new procedure, perhaps on different legal grounds;³¹⁴
- is guaranteed and observed by ombudspersons or other internal and external mediators to protect them from any internal pressure; these mediators should intervene collegially so that the decision does not rest on a single person;
- provides a database of applications and decisions made by institutes and ombudspersons;
- provides for a rating system for research institutes, thus enabling them to be supervised and leading, if necessary, to their funding being affected, which would constitute an incentive.

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³¹⁴ This is not done in the German system or in the European Code of Conduct for Research Integrity.

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13.

‘IDEAS CAN BE FREELY USED’: A VICTIM OF PLAGIARISM REFLECTS ON A LEGAL MAXIM AND OTHER LEGAL USAGES

Béatrice Durand

Abstract

When French academics take plagiarizing colleagues to Court, they often are disappointed by the reluctance of the judges to acknowledge the full dimension of the plunder. Often the judges refuse to qualify many of the alleged text passages as counterfeiting. Two main principles guide them: “Ideas are free” and can therefore not be protected as intellectual property; only “the form” (the wording) may be. Since scholarly work aims to produce intellectual contents – ideas –, its productions would be, as a matter of principle, excluded from legal protection. In addition, the first work must also be “original” in order to be protected. Scholarly work always includes a more or less important empirical part. Since primary sources are regarded as belonging to the public domain, empirical (data based) work cannot be protected.

Based on a personal trial experience this paper explores the semantic misunderstanding (“ideas”) and the inappropriate conception of empirical data as “public”, which lead to legal decisions unfavorable to the protection of research work.*

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1. Introduction

The following reflections are a result of a legal action I took against a colleague who had plagiarized parts of my *Habilitation* (German tenure work) in comparative literature. I had defended it at the Martin Luther-Universität in Halle, Germany, in 2003. The dishonest French scholar was convicted by French courts first time around as well as at appeal; a final appeal to the *Cour de Cassation* (the French Supreme Court) was eventually rejected.³¹⁵ Justice had been done and I had every reason to be satisfied.

However, when the initial judgment was made, I was surprised and a little disappointed that only seven passages (at first instance) and then nine (at appeal) were considered to be infringing. This represented less than 20% of the fifty-five alleged passages.

My lawyer comforted me: the infringement had been recognized. Given the small number of copies recognized in court, the fine—2,000 euros—was substantial. This proved that the judges had taken the offence seriously. But for me, it was as if they recognized it in principle but were still reluctant to identify it concretely.

My second surprise as a non-lawyer was that the judges did not dispute the fact that many passages were taken from my work. However, a substantial proportion of them were not considered infringing, including examples of identical or almost identical copies. It is therefore possible to copy, even verbatim, without it being illegal.

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³¹⁵ *Tribunal de Grande Instance*, Paris, 12 May 2016; *Cour d'appel*, Paris, 27 March 2018; *Cour de Cassation*, Paris, 20 May 2020. The offending colleague was condemned both for plagiarism infringement and for the unauthorized disclosure of an unpublished text. The following remarks concern only the judges' assessment of the plagiarism.

Judges have two main criteria for establishing (or refusing) plagiarism infringement:

- Copies must be *identical or quasi-identical*, for only the form (i.e. the expression or wording) can be protected. *Ideas* are not protectable as such; according to Henri Desbois's maxim, they are 'free to be used' (*de libre parcours*), meaning unprotectable or free of rights.³¹⁶
- The wording must not be *commonplace*; it has to be *original*. In order to be infringing, the passage must not express *common knowledge* or be a matter of *redactional necessity*.

Combining these two principles—the free circulation of ideas and the requirement of originality (in the legal sense of the term)—it was possible to deem that even literal copies were not plagiarism, or so it seemed to me. Thus, any scholarly work, expository writing, or essayistic literature (what is called in French *littérature d'idées*), as opposed to narrative and/or fictional literature, would, as *a matter of principle*, be excluded from the protection due to intellectual property. This disturbing paradox is likely to shock anyone whose job consists precisely in producing *ideas*—or indeed any type of analyses, commentaries, hypotheses, theories, etc.

I will therefore try to show why, in my opinion, the criteria judges use in order to assess plagiarism in scholarly work lead to too few verdicts of liability. These criteria—or rather the way they are applied—lead to court verdicts that plagiarized scholars consistently find arbitrary.³¹⁷

³¹⁶ This maxim summarizes the legal principle that 'ideas' are excluded from legal protection. Henri Desbois (1902–1985), a French lawyer specializing in intellectual property, formulated this maxim in a book that remains an authority: *Le droit d'auteur en France* (Paris: Dalloz, 1978).

³¹⁷ This feeling of injustice and arbitrariness is shared by researchers and the authors of documentary works, as Hélène Maurel-Indart notes in her book: H.

2. Why would ideas not be protectable?

In my appeal judgment, five passages were not considered as infringing on the grounds that ideas are ‘unprotectable in themselves’, for example:³¹⁸

5	p. 13: Isolation must be as absolute as possible. The experiment, real or fictitious, is conducted for the purpose of empirical verification. What is to be verified varies from one text to another: is there a natural or Adamic language? [...] What is the ‘natural’, innate potential of the human mind?	p. 101: The isolation of the child must allow the revelation of knowledge about an original state of man, by definition inaccessible to historical investigation. What is to be verified varies from one text to another: is there an original language? Is there a natural aptitude for language or thought, are moral or religious ideas innate, is the first infidelity male or female...
6	p. 14: The experimental intention allows us to oppose Psammatic’s children to ‘real’ foundlings. The former [...] were the products of an experimental will, the latter of an accident (or even a crime).	p. 101: We will therefore only consider fictions where the isolation of the child is deliberate and clearly part of an experimental process, excluding those where the isolation is accidental or criminal.
15	p. 21: ... using various narrative strategies in order to feign authenticity [...] and gain the reader’s trust	p. 107: ... these philosophical fictions try to gain the reader’s trust through various narrative devices

The appeal judges commented that ‘copying ideas is not objectionable’ and ‘even if the ideas are similar, which is not objectionable, the form is neither identical nor nearly identical’.

Maurel-Indart, *Plagiats, les coulisses de l’écriture* (Paris: Éditions de la Différence, 2007), in the chapter ‘Les chercheurs de l’ombre’.

³¹⁸ All passages from both works have been translated from French.

This is the first difficulty with the obsession with *form* over content (ideas): it focuses on something that is not essential to scholarly work, at least in the narrow sense of *form* as style or wording (which is how the judges use the word). Style is admittedly an issue in scholarly writing, and everyone has found that some academics write better than others, but the true purpose of scholarly work is not beautiful style: it is the production of new ideas.

It is as if judges assess (or refuse to assess) plagiarism in scholarly work using criteria that are relevant to literature but not to academic work. Textual fetishists who define literature as the output of the poetic function of language (to use Jakobson's famous categories) would certainly enjoy the attention judges pay to wording and style. However, judges are obviously not interested in the literalness of copies for aesthetic reasons but rather for practical reasons. They hope to find in 'form' some solid evidence of plagiarism. But in doing so, they miss what, in academics' view, should be protected: the content.

Moreover, the implicit definition of form as a combination of words is restrictive. In order to decide whether a copy is infringing or not, judges simply *compare sentences*, which plaintiffs and defendants, anticipating the judge's argumentation, have already isolated from their context and listed in a two-column comparative chart. The notion of 'form' should include structure—for example lines of argument, whether local (at the level of the paragraph or page) or global (at the scale of larger sections or the whole work).

The worst thing about the refusal to protect ideas as such and to require (almost) formal identity between plagiarized and plagiarizing texts leads to a dramatic paradox: it prevents the punishment of cosmetic operations. The obsession with formal identity could even be interpreted as an encouragement to cleverly disguise theft: take the ideas, for they are not protectable, reformulate them, say things differently in an *original, unnecessary* way, and you are within your rights. The fact that

the plagiarist could receive some kind of compliment for his so-called stylistic originality infuriated me as the plagiarized party!

On the other hand, anyone can understand why ideas are ‘excluded’ from protection, as Henri Desbois puts it. To protect ideas (in the legal sense of the word: to condemn their reproduction) would impede freedom of thought and therefore research freedom. You would be prevented from having an idea if someone had got it before you. That is why ideas are free.

The problem with the word *idea* is that it can have several meanings: it can mean an intuition, a mental illumination, but also the result of intellectual work, which is a set of articulated propositions, not only put into words but integrated into an argumentation process.

However, the French Intellectual Property Code (CPI) does not use the word *idea*—nor does it use the word *form*.³¹⁹ The law speaks of *conception* and *realization*: ‘The work is regarded as created, independently of any public disclosure, by the sole fact of the *realization*, even if unfinished, of the author’s *conception*’ (CPI, article L111-2, emphasis added).³²⁰

If Henri Desbois’s adage is to make any sense, the word ‘idea’ can only mean a *conception* that is not yet realized, since, if the conception were *realized* in the work—and if it were original—it would be protectable. One can easily understand why the legislator protects the *realization* but not the *conception*: you cannot protect conceptions that exist only in the mind of their author. The *conception* (the design, the project) must be *realized* in order to be communicated and disclosed.

³¹⁹ Légifrance, *Code de la propriété intellectuelle*, 2021.

³²⁰ The same applies to the German *Urheberrechtsgesetz*. With one exception in both cases: the term *ideas* appear in Article L 122-6-1 of the French CPI and in § 69a and § 69d of the German *Urheberrechtsgesetz* in relation to ‘ideas’ underlying a computer program. But these articles do not exclude ideas from protection; they allow authorized users to access these ideas in order to understand the functioning of the software and correct possible errors.

Hence the importance attributed to its formal (i.e. material) realization, whatever the nature of its materiality.

However, when judges exclude a passage from a research work from protection on the sole grounds that 'it is only an idea and ideas are not protectable', they mistake the idea as *conception* for the *realized* idea (in fact the formulated and structured set of ideas that constitute the work). For 'ideas' produced by scholars are not pure mental intuitions. They are realized ideas; they are the output of intellectual work. Intellectual work does not consist only in giving a discursive (verbal) form to immanent ideas, nor in simply remembering or capturing ideas in eternal flight in a Platonic firmament of ideas.

The problem with Henri Desbois's adage is that the word it uses, as opposed to the words used by the Intellectual Property Code, is confusing. And it is the misfortune of any kind of expository writing—especially scholarly writing—that the word *idea* can be used ambiguously to mean two things that ought to be distinguished (and that are distinguished in law as such).

When judges reduce the protectable part of intellectual work to the originality of its formulations, not only do they retain a criterion that is inessential to scholarly activity but they misunderstand the true nature of the ideas scholars produces. These are not mere *conceptions*, but genuine intellectual achievements, that is, what the law calls *realizations*.

The distinction between *the idea as conception* and *the idea as realization* would solve this legal paradox, at least at an abstract level: the problem that scholarly works and the whole 'literature of ideas' is not protected as a body of ideas.

Indeed, the case law is not monolithic. Some judgments consider that analyses are an element of the *realization* of the author's *conceptions* and, as such, are protectable. This makes it possible to interpret changes in form as counterfeit: of disguising the act of borrowing rather than as a

manifestation of stylistic originality. Hélène Maurel-Indart quotes a judgment establishing a typology of what is likely to be considered *original*: ‘simple repetitions of expression’, ‘borrowings, which, without being mere copying nevertheless bear the mark of their origin’, ‘typical words, assembled or not’, ‘19 quotations [...] in the same order’.³²¹ This kind of legal decision does not completely dissociate ‘content’ from ‘form’.

3. The *commonplace* criterion

I had accepted the principle that contents (ideas) are not protectable and that copies must be identical or almost identical to be considered infringing. It was therefore a source of great irritation to me when I learned that the criterion of textual identity, which seemed to me both overrated and inadequate, was a necessary but not sufficient condition for considering repetitions as infringing.

In the appeal judgment, the *commonplace nature* of the expression was the reason given for not considering thirteen fairly literal copies as infringing. This argument was often combined with the *unprotectability of ideas* and/or the notion of *redactional necessity*.

3.1 *Commonplace terms and redactional necessity*

Commonplace, in the legal sense of the term, means that a formulation is not new, as opposed to an *original* formulation, which has no precedent. *Redactional necessity* acknowledges that there are only so many ways of referring to facts, *especially if they are commonly known facts*.

Unless you artificially manipulate the order of words like Molière’s Mr. Jourdain in the *Bourgeois gentilhomme* (who tries to be original

³²¹ TGI de La Rochelle, 23 April 2002, Michel Le Bris vs. Mickaël Augeron concerning their two books on piracy, quoted by Maurel-Indart, p. 87. She describes this judgment as ‘courageous’.

when he writes his note to the Marquise), there is only one way to say 'water boils at 100 °C'. Redactional necessity is therefore a factor in the commonplace or a special case of the commonplace. And the copying of anything commonplace is lawful. According to the judges, who accepted my opponent's argumentation in this case, most of my sentences were *necessary* because of their factuality and were therefore *commonplace*. Even knowing that the legal meaning of the words *original/commonplace* is slightly different from their common meaning, I ended up wondering why my opponent had been so eager to copy so many commonplace expressions from my work. The image of literary research in his argumentation and in the judgments at first instance and appeal were not flattering ones, as if scholarly work was merely an eternal repetition of the same things.

It is understandable that judges look at the vocabulary used to assess whether infringement has occurred. However, this often leads to establishing the *commonplace usage* of the first author by isolating expressions or even single words out of their context. The commentary on the alleged copies in the appeal judgment provides a good example of how you can dilute meaning—and therefore infringement—by *breaking the sentence down into smaller units*:

26	p. 186: there is nothing, however, in Arnobius' text to indicate that the conjecture was based on empirical observations. On the contrary, Arnobius insisted on the power of imagination needed in order to imagine the scene and on the fact that the premises of the conjecture—the conditions for the feasibility of the experiment—must be admitted. [...] The place described by La Mettrie is slightly more artificial than Arnobius' cave [...] The rewriting suppressed the appeals to the reader's power to imagine a situation. It insists more clearly on the manmade character of the experimental device, trying to substantiate its feasibility.	p. 122: ... nothing in the original text allows one to guess that the rhetor draws on any observations. Arnobius, on the contrary, insists on the purely speculative nature of fiction and even appeals to the reader's benevolence to imagine a situation, which is certainly possible in theory, but cannot be based on any facts [...] Moreover, the realism effect is combined with certain modifications that mainly concern the experimental device: more artificial than in Arnobius' work, the isolation imagined by La Mettrie insidiously suggests to the reader that it would, in fact, be quite easy to conduct the experiment.
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The judges commented on this copying as follows: '[1] cannot reproach [2] for using in his commentary the expressions "nothing in the text", "any observations", "Arnobius, on the contrary, insists on", "more artificial than in Arnobius' work", which are commonplace; [...] there is no unlawful reproduction' (concerning passage no. 26, appeal, p. 18).³²²

The *commonplace nature* of the terms was also the reason given for no longer considering as infringing on appeal a passage (no. 44) that had been considered infringing in the court of first instance:

³²² For the sake of anonymity, the first author is referred to as [1] and the second one as [2].

44	p. 272: Ariste's inner language, this 'mentalese', whose development is presented by the text as innate, has one more property traditionally attributed to the Adamic language (or aimed at by the creators of artificial languages) [...] It would make designation superfluous	p. 276: The student of nature possesses an inner language, Adamic and universal, which would give him direct access to things and make designation superfluous
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'... [2]'s wording [...] does not indicate unlawful copying since [2] shows that the notion of "Adamic language" can be found in Umberto Eco's book *The Search for the Perfect Language (The Making of Europe)* published in 1993 and that [2] himself used it in a book published in 2005...'. Umberto Eco did indeed write a book (*The Search for the Perfect Language – The making of Europe*, 1992) in which the expression 'Adamic language' appears on every page, but he did not comment on the linguistic dimension of eighteenth-century fiction about feral children. The judgment also considered the words or expressions 'collective isolation', 'isolating device', 'ensuring survival', 'contradictory', 'accreditation', 'fiction', 'non-intervention', 'sacrifice', 'guinea pig', 'the skills of normally socialized beings', etc., used by both authors as 'commonplace in the humanities'. Yet language is the best example of a common good and no word is original in itself.

This is especially true of the technical terms specific to a particular research field. The fact that *a term is common in a given discipline does not mean that it can no longer be used in an original way*. Originality can only be appreciated in a context, which is necessarily a context of ideas. The idea (the content) comes back like a boomerang...

3.2 Common knowledge and public domain: Are primary sources public?

The argument that the quotations borrowed by the dishonest scholar were *common knowledge*, that is, they belonged to a common fund, was used to avoid qualifying the copying of a series of quotations from primary sources as infringement. The notion of *common knowledge* includes historical facts and facts in general, and in my case also quotations from primary sources.

Three copied passages (29 to 31, corresponding to about three pages of text in both works) contained quotations whose selection and order the second author had reproduced. The judges did not accept the first two (29 and 30) as infringement on the grounds that primary sources are *common knowledge*, as in passage 30:

30	p. 304: He wonders how to provide the test children for the experiment, stressing ironically that, if philosophers had children themselves, none of them would be 'philosopher enough' to use them for the experiment (p. 396). He satirically weighs different possibilities: 'use orphans or abandoned illegitimate children, Caribbean, Eskimo, Californian, or Patagonian children (provided that they are not as huge as Bluebeard), or breed children for this sole purpose' '[Ich] glaube nicht, daß man werde vermeiden können, eine eigene Fabrik zu diesem Zwecke anzulegen' (p. 396).	p. 144: The next problem is where to find the test children: how many of these so-called philosophers would be philosopher enough to have the experiment performed on their own children [...]?' Will one use orphans, Caribbean, Eskimo, or Californian children? Given the problems with these options, there is only one solution left: organize a child factory for this specific purpose
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By contrast, passage no. 31 was considered as infringement, probably because the quotation from the primary source was only paraphrased and not identifiable as such:

31	p. 305: Wieland nevertheless ironically suggests going further with the speculation: the children should be grouped in different ways to enable comparisons: children of both sexes who are totally isolated; couples; children of both sexes who are isolated but close enough to meet; and finally two mixed groups with unequal proportions of boys and girl (twenty boys and six or eight girls and vice versa).	p. 145: Wieland nevertheless develops the virtual and ironical fiction of this enterprise, elaborating a complex experimentation program based on methodically constituted groups of children: children of both sexes who are totally isolated from each other children in couples children of both sexes who are close enough to meet; and finally two mixed groups with unequal proportions of boys and girl ...
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Since the texts on which literary historians work are in the public domain, it is permissible to use a set of quotations in the same order.³²³

The *publicity of sources* argument is sometimes combined with the *redactional necessity* argument. In my case, the other author had also copied sentences introducing quotations, that is, the portion of the

³²³ Several alleged passages at appeal (no. 21, 22, 34, 49) gave rise to similar argumentation: '... [1] and [2] deal with the same subject [...] *it is therefore not in itself unlawful to comment on the same passages of works written in the eighteenth century that evoked this same subject, as long as the formulations are not identical or quasi-identical*' (concerning passage no. 21, p. 10 of the judgment at first instance, p. 18 of the judgment on appeal). The commentary on passage no. 34 states: 'Considering that both academics are interested [...] in the same subject and that a comparison of the formulations does not reveal any identity or quasi-identity, [1] cannot reproach [2] for having commented on the same passages of W... 's text in his work and for having included quotations in footnotes that she herself introduced in the body of her thesis' (p. 20, similar arguments on p. 21 for passage no. 34 and p. 22 for passage no. 49).

commentary that is in between paraphrase and commentary but is nevertheless necessary in introducing primary texts, especially when dealing with little-known literature. The judges considered these passages as *redactional necessity* and therefore *commonplace*: ‘... that, dealing with the same subjects, [1] and [2] are led to address identical topics; that, in this case, the similarities in the terms are made *necessary* by the topics addressed; that the unlawful nature of the references will therefore not be assessed’ (concerning passage no. 9, p. 16 of the appeal judgment, emphasis added). In other words: the same sources (by definition public) would *necessarily* call for the same paraphrastic presentation, which must therefore be *commonplace*. Note the circularity of this argumentation.

It is therefore not only the result of research work (the ideas produced) that is unprotectable but all work on empirical material: the collection and processing of data or primary sources—texts, quotations, utterances (in linguistics), narratives or observations (in ethnology), archives (in history), statistical or otherwise quantified data, laboratory experiments, etc.—cannot be protected. In fact, the processing of empirical data includes selection, classification, comparison, identification of regularities or patterns—depending on the hypothesis one hopes to prove. Should all these operations be excluded from protection as a matter of principle?

Here again, the case law may vary. Hélène Maurel-Indart quotes judgments that refuse to sanction the plagiarism of the documentary part of a work. But Maurel-Indart also quotes the spectacular reversal at appeal of a first instance judgment that was highly unfavorable to the two authors of a biography of Juliette Drouet (Victor Hugo’s mistress). The two biographers had sued the writer Henri Troyat for plagiarism. The first instance judgment followed the classic argumentation pattern: the unprotectable nature of sources, historical facts, and quotations; the *necessity* in the chronological composition of the work (which followed

the stages of Juliette Drouet's life), redactional necessity, and the commonplace nature of expression in text passages that merely recounted known facts. The appeal judgment, on the opposite, interpreted the law differently and recognized the originality of the work done on the sources: 'According to the law, there is plagiarism of a biographical work when *the borrowings from the first author who has carried out research, selection, and classification of data belonging to the public domain according to a logic specific to him* go beyond a mere reminder of the earlier work and bear the mark of the first biographer'. This allowed the judge to conclude that '... Gérard Pouchain and Robert Sabourin's *Juliette Drouet* has all the characteristics of an original work', even though it refers to facts that are known or familiar to everyone.³²⁴ Hélène Maurel-Indart quotes from another judgment recognizing that the work on sources is protectable: '... the selection of excerpts and their arrangement in the development bear the personal mark of the researcher, whose work is consequently protected by the Intellectual Property Code'.³²⁵

One can understand the concern of law and judges when they consider that primary sources belong to the *common fund* or *public domain*. Everyone has a legitimate right to work on any author. You cannot patent a subject or a disciplinary field, nor can you prohibit people from researching documents, phenomena, or problems that have already been worked on.

But when judges automatically rule that the copying of passages containing quotations or paraphrases from primary sources is lawful because primary texts are in the public domain, they ignore the work involved in processing those data and sources, whatever the nature of

³²⁴ Appeal judgment, 19 February 2003, quoted by Maurel-Indart, p. 101.

³²⁵ TGI (Tribunal de Grande Instance) de La Rochelle, 23 April 2002, finding in favor of Mickaël Augeron against Michel Le Bris, quoted by Maurel-Indart (2007), p. 86.

this work may be. It is even an epistemological truism that you get the facts that you elaborate on, whether in the natural sciences or in the humanities and social sciences. In other words, even before the researcher's creativity manifests itself in their discoveries, their original intellectual achievement consists in elaborating on specific empirical data.

Sources or facts are certainly available to everyone. But making them speak requires time, prior knowledge, and specific skills—such as being able to decipher handwritten texts or texts written in ancient or rare languages, mastering certain techniques or software, etc. The empirical domains researchers work on are not what is commonly thought of as the *public domain*.

4. Conclusion

Of course we can understand the perplexity of judges in the face of the extreme specialization of the disputed works submitted to them, the material impossibility of reading them in full, and their desire to rely on objective criteria. Yet the two main criteria used—or rather how they are used—do not allow for appropriate protection of the intellectual work: first, because intellectual work uses specific or technical terms common to those working in the same field—which are therefore *commonplace* in the legal sense of the term. Second, because it deals with empirical data (of whatever nature) that judges are tempted to consider freely available in the *public domain* and whose description is spontaneously considered *redactional necessity*. Above all, because the purpose of intellectual work is to produce intellectual content, that is, ideas.

The feeling of arbitrariness provoked by court decisions—and the judicial uncertainty that is its corollary—is not caused by judges' individual preferences. It has structural causes: the ambiguity of the term *ideas* and the illusion that the empirical matters academics work on are common goods in the public domain.

I therefore would like to make a case for the better *protection of work that deals with primary sources*. In accordance with the terms of the law, I would also advocate for a *distinction between ideas as conceptions*, which are not protectable, *and ideas as realizations*, which should be protectable.

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14.

OWNERSHIP, ACCESS, AND SHARING OF DATA: WHAT DOES QUEBEC LAW SAY?

Sonya Morales

The neglect of the common good is against nature, it is patently unjust.

**Cicero, On Duties,
Book III, vi-30**

Abstract

Ownership over data may depends on their qualification (common goods or public goods) and their typology (personal, raw, derived, or compiled data). This paper raises the question about how to strike a balance between accessing and sharing research data for science knowledge and server boarder public interest with restrictive data ownership.*

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1. Introduction

Copyright Office, Université Laval, September 2020...

A PhD student in Computer Science and Engineering consults the Copyright Office. His supervisor holds a grant from the Natural Sciences and Engineering Research Council of Canada (NSERC). The student has been working as a research assistant on this project for 18 months. His mandate is to develop predictive algorithms for permafrost melt in Northern Quebec. He collected observational data, then compiled and analyzed them. He also conducted a survey of residents on the impact of melting permafrost on their way of life. The subject is a sensitive one, and the participants' responses attest to the northerners' great distress.

At the end of his project, the student plans to set up his own company and wants to extract the raw data and results from the research project in order to reuse them. He argues that part of the analyzed data belongs to him and that the raw data are in the public domain. The researcher, on the other hand, maintains that both the data collected in the context of employment at Université Laval and the results derived from these data belong to the institution.

At the heart of this dispute is the question: who owns the research data? There are several aspects involved, as you will see in this chapter.

As a primary source of scholarship and a prospecting tool, research data validate hypotheses and findings.³²⁶ Professor Rob Kitchin uses the metaphor of building blocks to explain this interdependence: '[...] the raw material produced by abstracting the world into categories, measures and other representational forms [...] that constitute the

³²⁶ Government of Canada, *Tri-Agency Research Data Management Policy*, 15 March 2021.

building blocks from which information and knowledge are created'.³²⁷ Whether they are numbers, text, images, or sound, research data are collected, used, and recognized by the scientific community in empirical research.³²⁸ Scientific integrity in the handling of such data is a *sine qua non*.

Data have cultural and scientific value but also economic value. In respect of the last kind, in 2017 *The Economist* published a special issue on research data with the following title: 'The world's most valuable resource is no longer oil, but data'; it highlighted the importance of regulating data access, sharing, and reuse, especially by Web giants such as Google, Apple, Facebook, Amazon, and Microsoft (the GAFAMs), which control data circulation.³²⁹ Now that machine learning allows for the creation of problem-solving systems based on big data analysis, the status of data calls for '[...] serious, sustained thought about an object that there is every reason to believe the main economic protagonists wish to appropriate'.³³⁰

Although scientific and academic research data represent a less massive amount than what is collected by the GAFAMs, their use must be supervised, especially when the use of these data has a high collective or societal impact. This framework underpins good governance at all stages of their life cycle. Institutional or organizational rules have

³²⁷ R. Kitchin, *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences* (Thousand Oaks, CA: SAGE Publications Ltd., 2014), p. 1.

³²⁸ Organisation for Economic Co-operation and Development (OECD), *OECD Principles and Guidelines for Access to Research Data from Public Funding* (Paris: OECD Publications, 2007), p. 28.

³²⁹ 'The World's Most Valuable Resource Is No Longer Oil, but Data', *The Economist*, 6 May 2017.

³³⁰ K. Benyekhlef and J. Zhu, 'Intelligence artificielle et justice: Justice prédictive, conflits de basse intensité et données massives', *Les Cahiers de propriété intellectuelle*, 30(3) (2018), 789-828.

therefore been drawn up in order to better manage research data, in addition to the regulations already in force on respect for privacy and consent in the processing of personal data.

In order to assess the degree of circumspection required in the management of data, it is first necessary to categorize research data according to their typology, namely personal or nominative data, primary or raw data, and derived or compiled data. The processing of raw data does not face the same requirements as the processing of analyzed data subject to intellectual property protection, and the use of sensitive personal information does not have the same legal impact.

The classification of data also allows us to grasp the various nuances relating to their legal qualification based on the theory of goods (private, common, or public) (section 2). This classification raises the question of the ownership of the data and consequently of their protection (section 3), then of their management (section 4).

This text highlights the dilemma between access and sharing of research data in the legitimate interests of science and the more restrictive principle of private and exclusive appropriation.

2. The legal status of research data

Scientific research in Canada distinguishes between three broad categories of digital data: (1) observational, operational, or factual data; (2) processed, interpreted, analyzed, or compiled data; and (3) nominative or personal data.³³¹ The Canadian policy guidelines also identify the source of the data: public sector or third parties. But before addressing these categories, we will analyze the first branch of the typology, the one offered by the general theory of goods.

³³¹ Government of Canada, *Tri-Agency Research Data Management Policy*.

2.1 The characteristics of information assets

In contrast to commons, which can be used by all but whose exploitation leads to their depletion, informational public goods such as software, the Internet, or research data can be appropriated for commercialization, exchange, or sharing without the risk of compromising the primary source.³³² Public goods are non-exclusive and are characterized by being non-rivalrous (Figure 1).

Indeed, the appropriation or use of a public good by one agent (researcher, public or private institution, etc.) does not prevent another agent from using it at the same time. The use of information assets by several researchers simultaneously is a way of optimizing the resource for the well-being of the community and of science; unlike common goods, whose sustainability is only ensured through collective management (self-managed system).³³³

³³² E. Ostrom, *Gouvernance des biens communs pour une nouvelle approche des ressources naturelles* (Brussels: De Boeck, 2010), p. 47.

³³³ Ostrom, *Gouvernance des biens communs*, p. 114. A self-managed system is the preferred kind for the sustainable management of the commons. This system provides for collective participation in operational rules, balance between provision and ownership, monitoring and conflict resolution mechanisms, and sanctions.

*Figure 1: Categorization of goods.*³³⁴

	Exclusive	Non-Exclusive
Rivalrous	Private property • Our movable and immovable property • Intellectual property	Common goods • Collective or participatory management • Decisions taken in collegiality • Appropriable, exhaustible assets ➤ For example - Elements of biodiversity, plant genetic resources, etc. - <u>Excluding</u> common things (air, water) - <u>Including created common goods</u>: grazing areas, irrigation systems.
Non-Rivalrous	Mixed property • Toll bridges and roads	Public goods • Management by one entity for the benefit of all • Appropriable, non-exhaustible assets ➤ For example - Lighting, national defense - Information goods: knowledge, culture, free software, the Internet, and research data

If we exclude interpreted data subject to intellectual protection (patent, copyright, etc.), which fall under the category of private goods,

³³⁴ Figure adapted from S. Morales, 'La qualification et le traitement légal des ressources phytogénétiques au bénéfice de la sécurité alimentaire mondiale durable: Regard critique sur leur gestion' (unpublished doctoral thesis, Université Laval, 2016).

and personal data, whose use is linked to the free and informed consent of the individual (see section 2.2), it would be fair to say that primary research data do not belong to anyone. They are public goods managed by private companies or public organizations that develop rules at each stage of the data's life cycle.

2.2 The appropriation of observational, operational, or factual data

With respect to observational, operational, or factual data, we argue that any notion of ownership can be more appropriately replaced by that of a trust. Raw data are facts or simple observations, there is no category of intellectual property to protect them, nor is there any public policy law to deal with them. Facts are part of the public domain and, like ideas, they are free to roam and cannot be privately appropriated by an agent. They must remain available to everyone. Their appropriation would impose limitations that would be detrimental to science, since everyone has 'the right... to share in scientific advancement and its benefits'.³³⁵

We believe it is important to assess the impact of research data from the perspective of public welfare and to separate it from a purely commercial motivation. It must be said that we have ethical concerns about the appropriation of data collected with public funds.

3. Ownership and protection of research data

While there is no doubt about the ownership of processed, interpreted, analyzed, or compiled data as an original work resulting from the expression of the author's talent and judgment, which makes it a work subject to intellectual property, there is no consensus concerning

³³⁵ United Nations, *Universal Declaration of Human Rights*, General Assembly Resolution 217 A (III), art. 27(2) UDHR (Geneva: United Nations, 1948); United Nations, *International Covenant on Economic, Social and Cultural Rights*, (Geneva: United Nations, 1966).

the ownership of nominative or personal data, and new designations could emerge.

3.1 Processed, interpreted, analyzed, or compiled data: A look at intellectual property

Data collected by members of academic institutions in the course of their employment and the results thereof belong to the institutions. The Regulation respecting intellectual property at Université Laval provides that the university is the owner of a document collection created by a member of the university when that person has used the university's name, time, services, or premises, or benefited from a grant requiring the university's approval (section 8.01).³³⁶ Similarly, and notwithstanding the moral rights, which remain with the authors, works created in the course of employment belong to the institution if the creator or author has benefited from the university's financial, material, or human resources. These provisions correspond to Section 13 (3) of the Canadian *Copyright Act*, which deals with the ownership of a work made in the course of employment.³³⁷ This institutional ownership is explained by the institution's accountability in case of allegations of misconduct, scientific fraud, or other wrongdoing. This accountability justifies the leading role of Canadian universities in the management of library holdings.³³⁸

The *Copyright Act* grants protection to processed, interpreted, analyzed, or compiled data as long as the resulting work is original, that

³³⁶ 'The documentary fonds includes documentation, research results, specimens and artifacts, collections, or databanks': Université Laval, *Règlement sur la propriété intellectuelle à l'Université Laval*, 22 April 1980, art. 2 (f).

³³⁷ *Copyright Act*, RSC, 1985, c. C-42.

³³⁸ M. Dubé, 'La titularité de la propriété intellectuelle', in *Propriété intellectuelle et université: Entre la libre circulation des idées et la privatisation des savoirs*, ed. by M. Couture, M. Dube and P. Mallissard (Quebec City: Presses de l'Université du Québec, 2011), pp. 55-78.

is, it expresses the talent and judgment of the creator or author.³³⁹ This condition of originality, coupled with the fixation of the work in a material or immaterial form, is decisive. Once a work meets these criteria, copyright protection is automatic and subsists in Canada for the life of the author and until the end of the fiftieth year following his death.³⁴⁰ Copyright in a work includes the exclusive right to produce, reproduce, perform, publicly perform, publish, translate, adapt, or transform the work or any substantial part thereof.³⁴¹ Any reproduction or dissemination of a protected work must comply with the limitations set out in the *Copyright Act* or be authorized by the copyright owner.

While a report or compilation is the result of the author's choice and arrangement, the criterion of originality cannot be applied to observations or factual data.³⁴² Raw data (quantitative or qualitative) are facts and their protection is not associated with any form of intellectual property. As Pierre Emmanuel Moyse puts it, 'In the absence of originality, the content is not protected' and the data are free to use.³⁴³ Appropriation of the raw data is therefore not an infringement, but failure to cite the source constitutes an act of plagiarism.

Because the *Copyright Act* does not rule on plagiarism, users are encouraged to consult institutional or governmental policies targeting acts of non-compliance. For example, the granting agencies' terms of reference define plagiarism as:

Presenting and using another's published or unpublished work, including theories, concepts, *data*, source material, methodologies or findings, including graphs and images, as

³³⁹ *Copyright Act*, s. 2.

³⁴⁰ *Copyright Act*, s. 6.

³⁴¹ *Copyright Act*, s. 3.

³⁴² Ostrom, *Gouvernance des biens communs*, pp. 17–19.

³⁴³ P.-E. Moyse, "'Les créatures subjuridiques': Les bases de données", *Les Cahiers de propriété intellectuelle*, 12(1) (2016), p. 4.

one's own, without appropriate referencing and, if required, without permission.³⁴⁴

Since the criterion of originality is rarely the predominant one in the ordering of databases, it would be reductive to view data protection solely from the perspective of intellectual property: a reductive view that '[...] is like that of a myopic person: sufficient to move, but too limited to foresee'.³⁴⁵ Therefore, even if raw data do not benefit from copyright protection, their access, sharing, and dissemination are subject to government and institutional policies dedicated to scientific integrity.³⁴⁶

3.2 Nominative or personal data

From a legal point of view, personal data are not appropriable, they are non-transferable like parts of the human body and cannot be claimed as a form of property, not even in respect of the natural person who holds them. But Teresa Scassa raises the possibility of a subcategory, that of quasi-ownership, which gives the holders control over the use of their personal data.³⁴⁷ Individuals have rights of access, correction, and withdrawal with respect to their personal information, but these rights together do not amount to full ownership. At most, we are talking about the management of our data.

Anyone who collects personal information has an obligation to protect the data throughout their life cycle: (1) collection; (2) storage, de-identification, anonymization, and retention; (3) access, use, and

³⁴⁴ Secretariat on Responsible Conduct of Research and others, *Tri-Agency Framework: Responsible Conduct of Research* (2016), 3.1.1 d., Plagiarism, emphasis added.

³⁴⁵ Moyse, "Les créatures subjuridiques", p. 11, note 17.

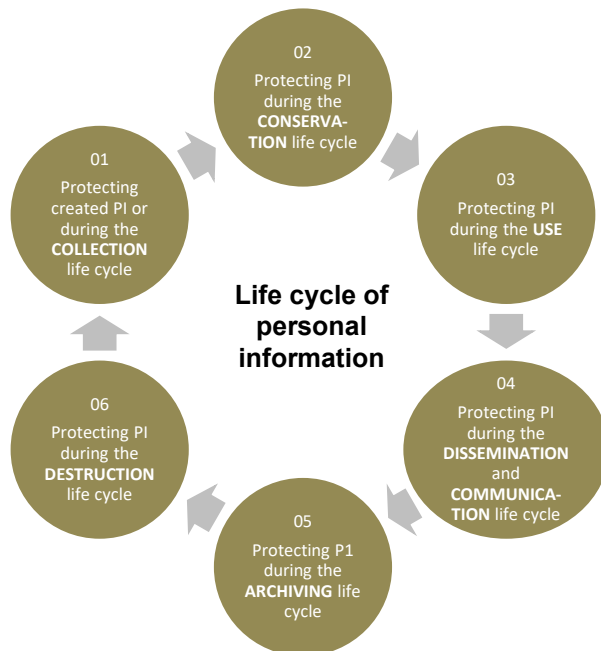
³⁴⁶ Fonds de recherche du Québec, *Policy for the Responsible Conduct of Research* (Montreal: Fonds de recherche du Québec, 2014).

³⁴⁷ T. Scassa, 'Data Ownership', *CIGI Papers*, 187 (September 2018), pp. 13–16.

reuse; (4) disclosure and dissemination; (5) archiving and preservation; and finally, (6) destruction of the data (see Figure 2).

Anonymization (irrevocable removal of identifiers) and de-identification or depersonalization (replacement of nominative information by an identification code) of personal data are processes that allow participants' privacy to be respected. Most university databases recommend, at the very least, de-identification of the data sets entrusted to them.³⁴⁸

Figure 2: Life cycle of personal information © DTI, Université Laval, 2019.³⁴⁹



The legal protection of personal data, particularly in Quebec, places privacy and consent at the center of the debate. According to the *Civil*

³⁴⁸ B. Lamarche and F. Desrosiers, *Cadre de gestion. Banque de données sur la santé durable* (Quebec City: Pulsar, Université Laval, 2019), p. 19.

³⁴⁹ Bureau de sécurité de l'information, *Durée de cycle de vie des données personnelles* (Quebec City: Université Laval, 2019).

Code of Quebec (CCQ), every person has the right to integrity and no one may infringe it without her free and informed consent.³⁵⁰ Furthermore, the risk incurred must be proportional to the expected benefits, and the research is subject to the approval of an ethics committee.

Article 20 of the CCQ provides that:

A person of full age who is capable of giving his consent may participate in research that could interfere with the integrity of his person provided that the risk incurred is not disproportionate to the benefit that can reasonably be anticipated. The research project must be approved and monitored by a research ethics committee.

For example, Université Laval has a Policy on Responsible Conduct in Creative Research and Innovation. The first principle ensures that humans and animals are treated fairly, with dignity and respect in accordance with the highest ethical standards recognized by the scientific community and society.³⁵¹

In Quebec, the *Act respecting Access to documents held by public bodies and the Protection of personal information* defines personal information as ‘information concerning a natural person which allows the person to be identified’.³⁵² Personal information becomes sensitive as soon as it is linked to other data on the person. The minimal impairment test is then used to determine whether the sharing of nominative data infringes on the integrity of the individual and the

³⁵⁰ *Civil Code of Québec*, CQLR c. CCQ-1991, 31 October 2021, art. 10, 20, and 22.

³⁵¹ Fonds de recherche du Québec, *Policy for the Responsible Conduct of Research*, p. 14, note 20.

³⁵² *Act respecting Access to documents held by public bodies and the Protection of personal information*, CQLR c. A-2.1, 21 September 2021, s. 54.

protection of his privacy, while also contravening the *Charter of Human Rights and Freedoms*.³⁵³ The use of sensitive personal data is limited to public interest purposes. In order to broaden the scope of its use, personal information may be subjected to various degrees of de-identification or anonymization. De-identified data are no longer considered to be personal information, as the identifier has been removed, and are therefore outside the scope of the legislation.

Legislative amendments are being considered to broaden the notion of consent in light of the digital reality and the development of artificial intelligence. In particular, Bill 64 proposes to validate implied consent, which would allow the disclosure of non-sensitive personal information for research, study, and statistical purposes or any other compatible purpose.³⁵⁴ Although this expansion has been questioned by legal scholars due to its vagueness, scientists welcome this step forward, which also aligns with some European standards within the General Data Protection Regulation.³⁵⁵

³⁵³ *Charter of Human Rights and Freedoms*, RSQ c. C-12, 31 October 2021, sections 1 and 5.

³⁵⁴ National Assembly of Québec, *Bill 64, An Act to Modernize Legislative Provisions as Regards the Protection of Personal Information*, Forty-Second Legislature, First Session (Quebec City: Quebec Official Publisher, 2020). Québec's Bill 64, was adopted unanimously, on September 21, 2021.

³⁵⁵ Centre d'accès à l'information juridique (CAIJ), *Dossier: Projet de loi n° 64: Loi modernisant des dispositions législatives en matière de protection des renseignements personnels*, 29 January 2022; Ligue des droits et libertés, *Mémoire présenté par la Ligue des droits et libertés devant la Commission des institutions, Assemblée nationale du Québec*, 23 September 2020; European Union, 'Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)', *Official Journal of the European Union*, L 119 (2016).

We will conclude this section by reiterating that the concept of ownership and exclusivity seems to us ill-suited to research data for the following reasons: first, if the data concern a natural person, this information is not free to be disposed of; second, with regard to publicly funded research data and large granting bodies, these agencies insist that research data should be shared and not privately appropriated. Thus, any notion of ownership will be advantageously replaced by the notion of a trust, whereby the managers or custodians of the resource control access to and sharing of the data for the benefit of the community but do not own it. This notion will be explored in Section 4.

4. Fiduciary management of research data

This section explains how fiduciary management can be applied to research data as public goods, at all stages of their life cycle, based on the models of platforms hosting data lakes in scientific research in Quebec.

4.1 Research data management: A look at trusts

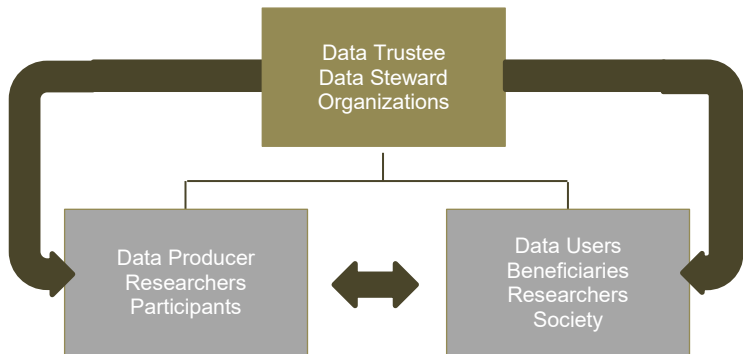
The CCQ provides that one may ‘...hold or administer the property of others or be trustee of property appropriated to a particular purpose’.³⁵⁶ Certain property whose use is common to many must be managed by laws of general interest. The CCQ even uses the expression ‘property... with acknowledgement of superior domain’ and by this designation refers to property whose social, cultural or scientific utility is so important that its private appropriation would risk harming the community.³⁵⁷ This is why public databanks have opted for the trust model as the one that best meets the ambition to ensure access and sharing.

³⁵⁶ CCQ, note 24, *Property*, art. 911 and following.

³⁵⁷ CCQ, art. 923.

A trust is an act by which a person (the settlor) transfers property for private or social purposes to another person (the manager), who undertakes to hold and administer it for the beneficiaries.³⁵⁸ A social utility trust is set up in the general interest; its objective can be cultural, educational, or scientific.³⁵⁹ It involves a tripartite relationship between the settlors (the producers of the data: researchers and participants), the manager (trustee, steward, or custodian) and the beneficiaries (the company, the researchers) (see Figure 3). The administration of the trust is subject to the supervision of the settlor, who provides for restrictions on the free disposal of assets and lays down internal operating rules. None of the parties involved has any real rights in the object of the trust. Moreover, the purpose of the trust is not the realization of an economic benefit, but more broadly a gain for society as a whole. The trustee must take care to preserve the property in order to maintain its quality and the use for which it was destined, as well as to secure its appropriation.³⁶⁰

*Figure 3: Typical trust structure for research data management.*³⁶¹



³⁵⁸ CCQ, art. 923, 1260, and 1266; Benyekhlef and Zhu, 'Intelligence artificielle et justice', p. 823, note 7.

³⁵⁹ CCQ, art. 1270.

³⁶⁰ CCQ, art. 923, 1301, and 1306.

³⁶¹ Figure adapted from S. Morales (2016, p. 389)

In an institutional data center, the trustee is responsible for planning and developing internal policies related to the management of the property. She oversees the implementation of management processes. Depending on the structure of the database, a steward may be added to manage access, sharing, and use of the data throughout their life cycle. Both have a custodial function and ensure the optimal management of the data access center.³⁶²

The producer of the data collects or creates the data; this may be the researcher or the participant. Finally, data users access the data to validate their hypotheses and support their research findings. Data users must report any problems with the quality of the data.

4.2 Public sector data: A look at the collective interest

Whether as a producer or user of data, a researcher is obliged to respect the laws in force and the data center's institutional or organizational policies. He must also observe the rules of academic integrity, that is, respect confidentiality; cite the source and provenance of the data; behave ethically and responsibly toward humans, animals, and the environment; and demonstrate honesty, probity, and intellectual and scientific rigor.

Prior to use, the researcher should ensure the quality and scope of free and informed consent for secondary use of research data for purposes other than the project for which they were collected. Secondary use is a public good, avoiding re-recruitment and re-collection of data, thus optimizing the investment of public funds.

Concerning data sharing, let us say that the thought process/ must be proportional to the sensitivity of the data. It is necessary to evaluate the

³⁶² Direction des technologies de l'information, *Document de travail sur les Principes directeurs pour assurer le fonctionnement et la gestion optimale d'un centre aux données de santé*, Unpublished document (Quebec City: Université Laval, 2020).

limits and duration of consent, the possibility of identification by cross-referencing, the purpose, and the collective interest. Data anonymization makes it possible to resolve these constraints. It is also necessary to provide for a collaborative ecosystem of exchange and sharing with very clear rules of access and use, and finally to draw up a data management plan. The latter generally specifies the type of data, metadata, storage and backup, conservation, sharing and reuse, and the person responsible for management.³⁶³

The protection of digital data by database managers, driven by government data management policies, adopts *sui generis* regimes based on collective interests and science.

Canada instituted a first policy on human research data management in 2014, entitled the *Tri-Council Policy Statement*.³⁶⁴ Currently under review, this policy outlines some basic principles, such as democratizing access to research results, ethical and responsible management, maximizing and reusing data, and placing data in the public domain:³⁶⁵

The agencies believe that research data collected with the use of public funds belong, to the fullest extent possible, in the public domain and available for reuse by others.³⁶⁶

³⁶³ Université Laval, *Plan de gestion de données*, 2020.

³⁶⁴ Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada and Social Sciences and Humanities Research Council of Canada, *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (Ottawa: Secretariat on Responsible Conduct of Research, 2014).

³⁶⁵ Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada and Social Sciences and Humanities Research Council, *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (Ottawa: Secretariat on Responsible Conduct of Research, 2018).

³⁶⁶ Government of Canada, *Tri-Agency Statement of Principles on Digital Data Management*.

5. Conclusion

A look back at the case study presented as a premise...

We proposed to characterize research data, then to analyze the concept of ownership. We then discussed the management of research data, based on Quebec legislation and on the various institutional policies of the platforms that host and manage data throughout their life cycle. These developments allowed us to answer many of the questions posed by the student and the researcher.

Can the student use the observation data he has collected for another project or for his company? Although the raw data are not appropriable, they are managed by the university, which has managed them with due diligence in accordance with government research policies and guidelines. For example, the data collected on the impacts of melting permafrost on the lifestyle of northerners represent sensitive personal information that cannot be shared without being anonymized. The university is the custodian of this data for the benefit of research and future generations. If the student wishes to use this data, he must obtain permission from the project manager.³⁶⁷ He may consult these data as long as he is a member of the project and may not extract any portion of them when he leaves.

Does the student own his analyzed or interpreted data? Although the student retains moral rights to the protected work, he carried out the analyses while employed by the institution; therefore, it is the institution that retains all economic rights and is entitled to manage these results.³⁶⁸

The ownership of data, including personal data, is discussed in several forums that would like to create a form of *sui generis* ownership that would consider the economic craze for data: '[...] the idea has been

³⁶⁷ Université Laval, *Règlement sur la propriété intellectuelle*, art. 8.02.

³⁶⁸ Université Laval, *Règlement sur la propriété intellectuelle*, art. 4.02.

floated and is being discussed'.³⁶⁹ At this time, neither Canada nor Quebec is considering the creation of this category of property in respect of research data.³⁷⁰

For our part, we endorse the classification of data and information assets as public goods and prioritize diligent, responsible fiduciary management in the collective and scientific interest.

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³⁶⁹ Scassa, 'Data Ownership', p. 4, note 21.

³⁷⁰ Scassa, 'Data Ownership', p. 15.

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WHEN WHISTLEBLOWERS NEED TO STEP IN: CONVOLUTIONS IN AND LESSONS FROM A HISTORIC CASE

Jean-Baptiste Soufron

Abstract

The article deals with one of the most publicised cases in France during the 2010s. It follows the journey from 2013, when he started his doctorate, to 2020, when the University of Paris 1 Panthéon Sorbonne cancelled his title. We will show how this affair, far from being a success in terms of investigation and academic reaction, is first and foremost the indicator of a profound failure and of a system incapable of reforming itself. For, if it had not been for the continuous action of whistleblowers through a precise and demanding anonymous Twitter account, and vigilant media, it is to be feared that this case would never have reached its conclusion.*

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1. Introduction

One of the main difficulties encountered by victims of scientific fraud or plagiarism is the extreme opacity of the rules applicable in this field, although it is well known that this opacity is not due only to the absence or imprecision of legal rules, but also to the mobilization of the related mechanisms by the university authorities.

In the cases most widely covered by the media where there are many players, the result is often a failure to achieve a convincing result and a strong feeling of confusion. This makes it impossible to set an example and discourages anyone from acting even if they encounter a similar case.

The highly publicized case of Arash Derambarsh, France, and the law faculty of University of Paris 1 Pantheon Sorbonne is a magnificent illustration of this, and its impact should be enough to convince heads of schools to make the fight against fraud and plagiarism their priority.³⁷¹

In this article, we will recount the twists and turns of this case—which took place over several years—to illustrate the difficulties of finding common ground between academia, the law, and the media.

2. Academia in bad shape

The facts can be summarized in a few lines. AD was a well-known personality, popular in the media, who distinguished himself in various public interest battles—for example, the fight against food waste. He was also a publisher at *Cherche Midi*, but, having failed the bar exams several times, in 2013 he tried to become a lawyer through a ‘side door’,

³⁷¹ In this article, we will name people the first time they are mentioned, then use their initials. The objective of a case like this one is not to focus on individuals, but to describe the situations in this case study.

In the interests of full disclosure, note that Jean-Baptiste Soufron received his law degree from University of Paris 1 Panthéon Sorbonne.

which was available to in-house counsel. The Bar Council refused, considering that his activities were not sufficiently legal. AD then used the ‘bridging procedure’ that allowed him to enter the Bar Training School directly after he had completed a PhD in law at a French university. With this kind of doctoral degree, no one risks censure by the Bar Council. Indeed, according to article 12-1 of the 1971 law governing the profession, PhD graduates in law have direct access to ‘theoretical and practical training [...] without having to take the entrance examination to the regional professional training center for lawyers’.

AD therefore enrolled in the law faculty of University of Paris 2 Panthéon Assas in October 2012. But he found himself dealing with a doctoral supervisor who refused to let him defend his thesis. Given this refusal, he enrolled at the Graduate Law School of University of Paris 1 Panthéon Sorbonne, where he was welcomed by Professor Bruno Dondero, who authorized him to present his work entitled *Police files, a legal and societal framework in a controversial context*. AD defended his PhD thesis on 11 December 2015, and then became a lawyer at the Paris Bar on 21 February 2018.

The second phase of this case is related to the fact that AD was a public figure making a name for himself. He was an elected municipal official in Courbevoie (a city near Paris), where he sometimes caused controversy. Very active on social networks, he published, in full transparency, the names of the members of his thesis jury on his Facebook account.

The composition of the jury upset academics because, in addition to the fact that his new director, BD, came from another university, they learned the names of the two lecturers who were to be thesis referees. The first one was a marketing teacher and president of a cultural association in the municipality where AD was an elected official. The second was an instructor of private and financial law. This jury also included a former minister and ex-Deputy who held a DEA in public

law but did not have a doctorate. However, he was to chair the jury. For the record, he had been published by AD at the Cherche Midi publishing house in 2011 and his book, *Le Mieux est l'ami du bien*, had itself been the subject of accusations of plagiarism.³⁷² This jury was completed by the lawyer Francis Szpiner, a public personality and French politician.

Academics wondered: how could this jury have been validated? According to article 19 of the decree of August 7, 2006, the jury must be composed as follows: 'At least half of the jury must be composed of professors or similar persons within the meaning of the provisions relating to the designation of members of the National Council of Universities or teachers of equivalent rank who do not depend on the Ministry of Higher Education'. Jury members should be chosen 'for their scientific competence'.³⁷³

The fact is that, in France, a jury that is not entirely academic is not formally prohibited. But this 'manifest community of interest' shocked several whistleblowers, who had informed by AD's announcement on his Twitter account. They alerted authorities at the Ministry of Higher Education, Research, and Innovation. No response.

But what really put the cat among the pigeons was that in 2018, Internet users who looked at the summary of the thesis online on theses.fr were astonished to find an entire paragraph that seemed to have been copied from a public report on police and Gendarmerie files dating from 2006.³⁷⁴

However, access to the thesis was cut off after this alert, which perhaps called for further questioning. Thus, AD's thesis was protected as a confidential document, for a period of... 32 years, until 11

³⁷² M. Deprieck, 'Lefebvre plagie pour boucler son bouquin', *L'Express.fr*, 24 March 2011.

³⁷³ 'Arrêté du 7 août 2006 relatif à la formation doctorale', Version of 6 March 2016.

³⁷⁴ Tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226479963081248768

December 2047. This clause can be invoked for high-security theses—particularly for reasons relating to ‘defense secrecy’ and ‘national secrecy’.³⁷⁵ Remaining confidential for this long seems astonishing for a research work that is, after all, quite standard. It led to ‘lively exchanges’ between University of Paris 1 Panthéon Sorbonne and various law professors in France, which were reported in the press.³⁷⁶ The thesis supervisor indicated later that the classification decision ‘was never the jury’s decision’ while AD claimed to have had no power over this decision.

3. Civil society and its whistleblowers

In response to these internal and external polemics, a letter of referral from the university president dated 11 July 2019 led to a disciplinary procedure.³⁷⁷ In France, only a university president can initiate this procedure, which explains why four years elapsed between the defense of the thesis and the opening of the procedure.

At the same time, a digital version that could only be consulted in libraries was authorized and a copy could be consulted at the Cujas library. This limited distribution interested several people, who created an anonymous Twitter account entitled *Thèse et synthèse* (‘Thesis and synthesis’). On 9 February 2020, these whistleblowers wrote:

We have read and analyzed the thesis of @arashDerambarsh, lawyer, PhD in law and recent @winwinaward award winner.
We now know the reasons why this thesis was banned from

³⁷⁵ Tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226423434344792065

³⁷⁶ M. Leplongeon, ‘Paris-1-Panthéon-Sorbonne accusée de couvrir une thèse de complaisance’, *Le Point*, 11 February 2020.

³⁷⁷ Y. Bouchez and C. Stromboni, ‘Thèse plagiée: L’université Panthéon-Sorbonne saisit la justice’, *Le Monde.fr*, 3 September 2020.

reading for 32 years at the request of its author. However, beyond their incomprehension as to why the thesis should be confidential, they felt above all that it was in fact the result of clear and almost complete plagiarism.

To hear them tell it, the facts seemed obvious. For example, page 13 seemed to them to have been produced by copying and pasting a foreign student's academic work from 2008, without the use of quotation marks and without ever citing him.³⁷⁸ Another example, with what they present as the complete copy of a pamphlet by the famous collective *Pièces et main d'œuvre*, which clearly represents 6% of the total volume of the thesis, excluding appendices³⁷⁹. The same is true of the supposed reproduction of paragraphs from a report by the critic Alain Bauer, from an article in *Dalloz* on the treatment of criminal records, from various press articles, from websites, etc. On the other hand, five of the people listed in the bibliography do not seem to have been mentioned anywhere in the thesis.³⁸⁰ As for the plan of the thesis itself, it apparently resembles that of a report submitted to the Minister of the Interior in 2008; the same report also seems to have been used as a source of several of the chapters called into question.³⁸¹

To prepare their case, the whistleblowers of the Thesis and synthesis Twitter account worked with antiplagiarism software, a simple method that does not seem to have been used earlier for this doctoral work.

³⁷⁸ Tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226528730576818176

³⁷⁹ Tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226451051433332738

³⁸⁰ Leplongeon, 'Paris-1-Panthéon-Sorbonne accusée'.

³⁸¹ Tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226482600090505217; tweet of 9 February 2020:

https://twitter.com/These_Synthese/status/1226489788578045954

Yet the software had existed at University of Paris 1 Panthéon Sorbonne at least since 2012—which could testify both to a willingness to fight academic fraud and to the consideration of the material means that must accompany it. But who used them? The question needs to be asked.

4. Media hype

AD was a public figure and an elected official who regularly appeared in the French media. He expressed himself freely and he appreciated being talked about. A debate was therefore quickly ignited.

One important point is that AD never claimed to want an academic career after obtaining his doctorate. Academia and its standards did not concern him directly. He decided to take care of his own defense by claiming that he had made simple errors of form. His arguments were repeated by his numerous supporters on social networks.

The national press then seized on the subject, thus creating publicity that led to new analyses. It appeared, for example, that the conclusion of the thesis was 99% plagiarized from a DEA thesis dating from 2004.³⁸²

A series of exchanges then began, forcing the university itself to respond on 12 February 2020 to the newspaper *Le Point*, which was investigating the case:

University of Paris 1 Panthéon Sorbonne is particularly vigilant about the quality of the degrees and other doctorates it awards. If necessary, the university takes all measures, both administrative and judicial, to ensure the preservation of the value and recognition of its degrees. For information, a disciplinary procedure may not be publicized and/or disclosed before its conclusion, in accordance with the legal provisions.

³⁸² Tweet of 12 February 2020:

https://twitter.com/These_Synthese/status/1227728548355506179

This obligation preserves the legality of the procedure in progress and guarantees respect for the fundamental rights and principles of the person referred to the court [presumption of innocence, right to be heard, respect for privacy, etc.].³⁸³

However, throughout the procedure, information appeared both in the press and on the Thesis and synthesis Twitter account, making this case undoubtedly one of the best documented in France.

On 20 June 2020, the Thesis and synthesis Twitter account indicated that it had completed the analysis of the thesis and was able to conclude: ‘We have completed the analysis of the thesis of Me AD.’³⁸⁴ In the 400 pages of the main text (excluding the summary and appendices), we have identified 92.64% copied and pasted. Allowing for a margin of error, we can state that the copy and paste amounts to more than 90%.³⁸⁵

On 22 June 2020, Thesis and synthesis made the thesis available in PDF form on a publicly accessible link, and on 6 July 2020, it announced the transmission of the details of its analyses to University of Paris 1 Panthéon Sorbonne.³⁸⁶

5. Back to academia

If we go back in time, it was on 21 June 2019, that the head of the Sorbonne Law School submitted a report to the president of University

³⁸³ Leplongeon, ‘Paris-1-Panthéon-Sorbonne accusée’.

³⁸⁴ *Me*: the abbreviation for *Maître*, the title for lawyers in France.

³⁸⁵ Tweet of 20 June 2020:

https://twitter.com/These_Synthese/status/1274395750231875584

³⁸⁶ Tweet of 22 June 2020:

https://twitter.com/These_Synthese/status/1275182191585132546; tweet of 6

July 2020: https://twitter.com/These_Synthese/status/1280028969883090944

of Paris 1 Panthéon Sorbonne, with a view to referral to the disciplinary commission.

On 11 July 2019, the university president sent the letter of referral.

One year later, on 10 July 2020, the disciplinary section of the academic council rendered a forty-page reasoned decision, announcing exclusion from any public institution of higher education and deciding on ‘the cancellation of the defense of the thesis concerned’, specifying ‘which implies, *de facto*, the withdrawal of the doctoral degree in law’.³⁸⁷ The decision was made public on 21 July 2020, signed by the secretary and the president of University Paris 1 Panthéon Sorbonne.

This report states that ‘from its introduction [...] to its conclusion [...], including its notes, its appendices, its bibliography, Mr. Derambarsh’s thesis manuscript is almost entirely composed of an assembly of texts, produced in an academic context or published by authors other than himself, and copied according to one or more plagiaristic procedures intended to make the reader believe that Mr. Derambarsh is the author.’

And, as the icing on the cake, the authority also accused AD of ‘the issuance of falsified versions of the thesis before the disciplinary section’.

Naturally, and even though this step does not have suspensive effect in France against an administrative decision, AD then decided to appeal the decision to the National Council for Higher Education and Research.

Of course, AD appealed the decision with a defense that had the merit of being extremely simple: he claimed that he had never plagiarized and, moreover, that no one had informed him during his studies at University of Paris 1 Panthéon Sorbonne that rules for academic citation existed.

³⁸⁷ Y. Bouchez and C. Stromboni, ‘L’annulation d’une thèse pour plagiat déstabilise l’université Paris I Panthéon-Sorbonne’, *Le Monde.fr*, 27 July 2020.

He stated that his manuscript did not contain plagiarism but it did have a big methodological problem involving the citation of sources.

He claimed not to have received any training in this area.

According to him, he ultimately modified his thesis as his jury asked him to do during the defense and then submitted the modifications in due time.

6. The law is called in as reinforcement

Perhaps in view of the media coverage of the case, or perhaps in view of the appeal, the university decided to go one step further and its new interim administrator, TC, himself a professor of private law, decided to report the matter to the public prosecutor—the procedure set out in Article 40 of the Code of Criminal Procedure, which requires any French authority to immediately inform the public prosecutor of any crime or offense of which it has knowledge, which corresponds precisely to the potential qualification of a case of counterfeiting.³⁸⁸

The university then decided to extend its report by alerting the President of the Paris Bar Association and the President of the National Bar Council.

The objective was clearly to push the profession to draw the consequences of the cancellation of AD's thesis by withdrawing the status of lawyer that he had obtained through the 'bridging procedure'.³⁸⁹

³⁸⁸ 'The prosecutor for the Republic receives complaints and denunciations and then decides what action to take about them in accordance with the provisions of article 40-1.'

³⁸⁹ Bouchez and Stromboni, 'Thèse plagiée'.

On 2 October 2020, presumably because of this ‘article 40’ procedure, the Paris public prosecutor’s office decided to open an investigation.³⁹⁰

On 10 November 2020, the disciplinary section of the Bar Council refused to issue a provisional sanction to practice the profession, while maintaining the professional order’s procedure on the merits.

The disciplinary section took the opportunity to criticize the university’s management in this regard, stating that ‘the accusations are not sufficiently substantiated’—mainly because the results of the investigations carried out on the different versions of the thesis had not been communicated.

And more generally, the professional body seized the opportunity to send a message by stating that the university ‘has shown culpable casualness in the monitoring of students, the composition of juries, and the management of theses in general, especially that of the party being sued.’

On 16 December 2020, on the other hand, the National Council of Higher Education refused to suspend the cancellation of AD’s thesis pending the appeal process on the merits.

7. Lessons from the ad case

The case is still ongoing in 2021, but it has already taught us many lessons.³⁹¹

First, and this is what emerges from too many plagiarism cases, one can only be astonished at the incredible expense of energy that was finally necessary to motivate the university authorities to act.

³⁹⁰ F.B. avec AFP, ‘Thèse plagiée à la Sorbonne: Le parquet de Paris ouvre une enquête’, *BFMTV*, 30 October 2020.

³⁹¹ On 27 April 2021, the Order of Lawyers of the Paris Bar decided to strike AD off the roll. He appealed the decision, which suspended its execution for the time being.

But we have to realize that the whole process required a whistleblower, hours of analysis and debate, and an anonymous Twitter account making more than a thousand tweets over the course of almost a year.

And above all, remember that the issue was only made public because of AD's personality and media profile. He never intended to become an academic, and he seemed to be unaware of the uproar caused by the liberties he took with academic ethics.

And then, of course, there is the very unusual context at University of Paris 1 Panthéon Sorbonne: President Georges Haddad wanted to resign in the summer of 2020 for health reasons, thus handing over to Thomas Clay, his interim successor, who perhaps did not seek to withhold information, as an elected president might have done. Thus, he was brave enough to proceed with a report to the prosecutor under the procedure known as Article 40 of the Code of Criminal Procedure.

In other words, this case would be more likely to discourage potential plaintiffs who do not have the energy of AD's opponents, their resources, or simply the favorable circumstances linked to his over-investment in public debate and his public personality. Unfortunately, this case demonstrates the impossibility of acting in France for victims or witnesses of academic fraud.

Indeed, in view of the difficulties encountered over nearly five years in analyzing AD's thesis, who would risk launching similar procedures today for another thesis or a postgraduate dissertation?

We must, perhaps, admit that one reason why this case was brought to light is that AD did not belong to academia. To put it another way, and unlike many other cases of plagiarism or academic fraud, he did not benefit from the connections that would have allowed him to obtain the support of the institutions that accompanied him in his journey.

In the end, make no mistake about it, it is the academic institution that was most damaged by this case. One cannot help but be struck by

the fact that what is being revealed today would traditionally have been accepted if another person had been involved.

This seems to be what the Bar Association wanted to point out, as it has a crucial interest in the quality and validity of the theses delivered by the university, since they allow any PhD graduate in law to enter the profession through the ‘bridging procedure’.

The Paris Bar and the Sorbonne University, founded respectively in 1340 and 1253, have not often found themselves at odds with each other, with the former reproaching the latter for ‘culpable casualness in the monitoring of students, the composition of juries, and the management of theses in general’.

But worse, no specific procedure seems to exist within the university to this day, and even when it was forced to launch an administrative procedure, the Bar did not mince its words, stating that ‘the accusations are not sufficiently substantiated’.

In other words, even in a crisis, when forced to react, one of the ancient jewels of the French university system was unable to implement a procedure that could be convincing enough according to the standards of interprofessional litigation—not to mention, of course, the standards of civil or criminal litigation for infringement of intellectual property.

While the university has initiated an administrative investigation, it has not appointed an ombudsperson or any other trusted third party to deal with such matters. Nor has it created a mechanism to protect potential whistleblowers, such as exists in some sectors—even though these mechanisms are provided for in the 2016 Sapin II law.

It is therefore to be feared that it will not be able to capitalize on the experience it has acquired and to formulate new rules that would be useful beyond this time of crisis.

8. Conclusion

Far from being a sign of success in terms of investigation and academic reaction, it must be repeated that this affair is first and foremost the indicator of a profound failure and of a system that is incapable of reforming itself.

It does, however, have the merit of pointing out what could be done, especially in relation to the importance of the role that should be played by the university president.

In this regard, it is important to briefly recall Article 40, paragraph 2 of the French Code of Criminal Procedure, the innovative use of which is probably the most interesting aspect of the appeal.

As this paragraph states, ‘Any constituted authority, public officer, or civil servant who, in the exercise of his duties, acquires knowledge of a crime or misdemeanor is obliged to give notice of it without delay to the public prosecutor and to transmit to this magistrate all the information, reports, and documents relating to it’.

The notion of constituted authority is not defined but refers generally to all magistrates and high officials invested with recognized power, designated as such during the French Revolution in 1789, as opposed to the constituent authority that had established them. Today, the obligation to refer to the public prosecutor is imposed not only on police officers, but on all categories of state and local officials.

Contrary to the current practice of academic secrecy, and following the example of the action taken by the interim administrator of University of Paris 1 Panthéon Sorbonne, the referral to the public prosecutor of any complaint of plagiarism, harassment, or criminal fraud should therefore be the rule for all university presidents any time they are seized of a case—in parallel with an administrative investigation.

At the end of this administrative investigation, and possibly after completing her own investigation, the public prosecutor can make three types of decisions: initiate proceedings, implement an alternative

procedure to prosecution, or close the case if she considers that the facts are insufficiently characterized or prescribed.

On the other hand, one cannot rely too much on this article insofar as it only covers crimes and misdemeanors, and in particular allegations of counterfeiting or harassment, but it cannot cover all other allegations of scientific fraud—including all the situations where the plagiarized document is not protected by copyright because the so-called ‘originality’ criterion is not respected.

This mechanism of referring a case to the criminal courts is therefore not perfect and will not satisfy all victims, but it has the advantage of placing things on another level of responsibility, in the hands of professionals, and in an existing procedural framework that is legitimate.

Above all, it avoids the creation of dormant files within the university administration, as successive complaints are made about the same people or teams. Indeed, the proliferation of complaints concerning the same individual or the same laboratory would be identified much more efficiently in this way.

It would also remind university presidents of their responsibility—because basically, it is their responsibility that could ultimately be at stake. Admittedly, Article 40 of the Code of Criminal Procedure does not provide for any specific sanctions. But what about the situation where a university has published a plagiarized thesis, dissertation, or even article? As publishers, they could be held liable.

Could the same thing apply to situations that may drift toward harassment, where they have not reacted after having been informed? Here again, their personal liability could be engaged. Except that, until now, most victims did not consider that they could take action directly against university managers or even presidents.

In the absence of clearer rules and a much greater responsiveness by governing bodies, it is only to be expected that people will demand that their own case be addressed with the same energy that they have seen on

this occasion. But there is no doubt that this will not happen. Nor is there any doubt that very few leaders will follow the example of the Sorbonne's interim president in deciding to use Article 40. Few structures will have whistleblower protection tools, a qualified ombudsperson, or a complaint follow-up process.

In these conditions and in the face of a situation that is not making progress, the real lesson to be learned from the AD case is that we should no longer hesitate to take action, by calling into question and directly challenging university and academic leaders—those who allow this to happen, and sometimes even those who organize fraud through their benevolent indifference.

Hopefully, it will not always be necessary to take action through courageous, but unfortunately anonymous, Twitter accounts. It is time to put integrity at the heart of the democratic debate so that discussions can finally take place openly and in complete transparency.

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**TOWARDS AN INSTITUTIONAL
CULTURE OF INTEGRITY**

INTRODUCTION

*Jacques Hallak**

Fighting corruption and promoting integrity have been concerns for societies since the dawn of time. In Greece at the time of Pericles, for example, in order to combat political corruption, the five hundred members of the *Boulē* (50 per tribe), which assisted the assembly of citizen peoples—the *Ekklēsia*—were chosen by lot to reduce political corruption. In Exodus, the second book of the Bible, judges are strictly forbidden to receive gifts in order to promote integrity in justice.

Over the centuries, this concern has continued, but it has probably become increasingly important with the globalization of financial, material, and human exchanges. It became crucial to certify trade. For example, one of the main tasks of customs officers was and still is to check the validity and conformity of declarations. Auditors' reports became mandatory. Since the birth of the non-governmental organization Transparency International in Berlin in 1993, a growing number of regional and international initiatives have helped to extend and formalize the goal to fight corruption in all sectors of economic and social activity. The requirement for transparency is now one of the regulatory conditions of democratic societies.

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However, in the education sector, four recent developments have contributed to enriching reflections on the issue of integrity and the fight against plagiarism and raising the question of institutional arrangements in new terms.

- Mass access to higher education—and consequently an increase in the number of graduates—is observed in both industrial and developing countries. Cross-border higher education, international recruitment of graduates, and therefore the need to adapt institutional arrangements to ensure that certification systems are genuine and valid are concerns of both the public and the business sector.

- It is true that the reconciliation of intellectual property rights with respect for the human right to access knowledge is a process that is not yet complete. However, the generalization of access to the Internet and the popularization of the use of computer software have resulted in numerous easy opportunities to copy and appropriate knowledge. At the same time, software designed to check the originality of content and combat plagiarism has also emerged, strengthening institutions' capacity to contribute to the integrity of operations in the education sector.

- Another silent change observed over the last few decades is the widespread confusion between information and knowledge. This development has probably made the fortune of certain large specialized companies (the GAFAMs). But above all, it has favored a serious change of course in the education sector. Professor Baptiste Dericquebourg notes that, in France,

“commentary is eclipsing the dissertation, the Greek or Latin theme has disappeared, giving way to the version, and the Holy Grail of the university career, the famous ‘State doctoral thesis’ (*thèse d’État*), is only a way of making the interminable list of

secondary sources on this or that subject even longer...

It is no longer written to defend an original point of view.”³⁹²

It is only slightly exaggerated to say that training in data retrieval is becoming central in some education systems. This is done at the expense of learning to think and to be creative.

- But perhaps the most problematic current transformation is the creation of ‘participatory knowledge’ such as we see, in the extreme case, in Wikipedia. Anyone can contribute to it or modify or delete any given element that appears in it. The authorship of the text becomes collective. Some specialists do not hesitate to consider that even the organization of work and the evaluation of individual success are affected. This raises a challenge for institutional arrangements.³⁹³

These developments are directly relevant to the five chapters in this section of the book dealing with institutional arrangements.

The first article, by Caroline Hunt-Matthes, provides a historical overview of our academic institutions in an effort to understand their resistance to change. The author takes stock of a world that has remained essentially patriarchal. Today, these institutions in the social and economic sector are affected by their environment while they themselves affect their environment: the business, cultural, and political worlds. Aiming to promote integrity in higher education without taking this reality into account is doomed to failure. The author concludes with some concrete proposals such as the creation of writing centers and

³⁹² M. Giroux, ‘Adieu, la littérature?’, *Marianne*, 1235, 13–20 November 2020. Review of B. Dericquebourg, *Le Deuil de la littérature* (Paris: Éditions Allia, 2020).

³⁹³ E. Chang, ‘Digital Meritocracy: Intermediary Organizations and the Construction of Policy Knowledge’, *Educational Policy*, 34(5) (2020), 760–84.

independently managed reporting channels and the adoption of innovative honor codes.

The second chapter, by André Ciavaldini, takes us to the shores of a world that few people know well, the world of psychoanalysis. At the end of a very detailed analysis of the psyche of the sexual pervert and the ‘manipulative’ plagiarist identified by Michelle Bergadaà in her research, showing the similarity of their behaviors (and their origins), the author reveals that academic institutions are not equipped to identify and treat these manipulators. The author tells us that ‘plagiarism seems to be built out of this conjunction: a lack of self-esteem and the inability to accept the reality of the situation, which is too hurtful’. There is therefore no reason why our institutions of higher education should be less enmeshed in these perverse games than health care or religious institutions are by pedophiles.

Can technology save us? Many take it for a universal panacea! Nadine Eck’s article rigorously explores the potential and limitations of similarity detection software, which is widely used in higher education institutions. The author reviews the study of various cases of plagiarism and concludes that similarity detection software is unable to identify sophisticated plagiarism or plagiarism related to certain representations such as maps, tables, or photos. Thus, although similarity software is constantly being improved, it should be seen as an essential tool for awareness and deterrence of mass plagiarism.

After three very realistic, but potentially discouraging chapters, we come to the last two chapters in this theme. Both are equally realistic and propose that we act at a global level rather than in a piecemeal fashion to deal with the problems that arise. By adopting the perspective of true institutional responsibility, we are encouraged to act at the level of institutional arrangements on the one hand, and the people who make them up on the other.

The chapter by Peković, Janinović, and Vučković describes the step-by-step adoption of a concrete academic integrity policy by the University of Montenegro. This very informative article is exemplary in that it systematically presents all the institutional arrangements that need to be in place in order to ensure that the conditions exist for a successful integrity policy in universities. The support of IRAFPA in this process allowed for a holistic approach to be established from the outset, which was developed for the institutional environment and ensured the implementation of all the required institutional arrangements. This integrated ten-step policy covers everything from the commitment of the institutions' governing bodies to the implementation of an internal and external communication policy and the establishment of sanctions, for example.

Finally, with the article by Susana Magalhães, we dive into a very concrete experience with integrity training for researchers. The author proposes a more participatory 'bottom-up' strategy to promote integrity in research, which incorporates techniques in the sessions that place democratic debate at the heart of the appropriation of what can be a true ethic of virtue. But more than that, by living with codes of conduct, debating them, and asking for them to be updated, the author shows us that it is possible to establish a knowledge democracy... on a small scale. She concludes by envisaging cooperation with other national and international institutions of excellence.

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16.

CORPORATE SOCIAL RESPONSIBILITY AND ACADEMIC INTEGRITY: A PATH TO GLOBAL CITIZENSHIP

Caroline Hunt-Matthes

If a teacher does not involve himself, his values, his commitments, in
the course of discussion, why should the students?

Paul Wellstone

Abstract

The mission of our higher education institutions is to produce global citizens with the skills to contribute to a diverse and complex world in the 21st century. The objective, from a governance perspective, is to reconcile the priorities of the institutions with the social and economic objectives of society. This article examines the central elements of corporate social responsibility (CSR) for academic institutions, whether public or private, articulating in concrete terms what CSR means in practice for the higher education system. As academic dishonesty and corporate corruption continue to rise to record levels around the world, the nature of CSR needs to be considered in this context. A global commitment to academic honesty in the service of public integrity is essential in this regard. Some of the best practices in CSR are discussed with the aim of creating and maintaining a system of academic

institutions that are sustainable, responsive to external demands and accountable for the results they produce.*

1. Introduction: the responsibility to educate for twenty-first-century challenges in society

Our education systems are expected to discharge into society global citizens with the skills to contribute to a diverse and complex twenty-first-century world. The objective, from a governance point of view, is then to reconcile the priorities of the individual institutions and the broader social and economic objectives of society as a prerequisite for achieving the Sustainable Development Goals (SDGs).³⁹⁴

Of the thirty-seven plus definitions of corporate social responsibility (CSR) identified by Dahlsrud, the most often quoted is Carroll's four part definition of CSR captured in a pictograph as a four-tier pyramid: 'Corporate social responsibility (CSR) encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time'.³⁹⁵ In the early 1990s, CSR

* Corresponding authors: C. Hunt-Matthes. To quote this chapter: Hunt-Matthes, C., "Corporate Social Responsibility and Academic Integrity. A Path to Global Citizenship" in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.389-418, DOI: 10.58863/20.500.12424/4273120 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

³⁹⁴ Organisation for Economic Co-operation and Development, *2008 Annual Report on Sustainable Development Work in the OECD* (Paris: OECD Publishing, 2008).

³⁹⁵ A. Dahlsrud, 'How Corporate Social Responsibility Is Defined: An Analysis of 37 Definitions', *Corporate Social Responsibility and Environmental Management*, 15 (2006), 1-13; A. B. Carroll, 'A Three-Dimensional Conceptual Model of Corporate Social Performance', *Academy of Management Review*, 4 (1979), 497-505; A. B. Carroll, 'The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders', *Business Horizons*, 34(4) (1991), 39-48.

standard setting in the form of international agreements on sustainable development emerged, capturing a new philosophy of CSR: namely, the emergence of the Millennium Development Goals (MDGs)³⁹⁶ at the UN summit on the Environment and Development held in Rio de Janeiro, which translated into the adoption of Agenda 21 and the SDGs. CSR is a lens through which we can balance the global challenges and opportunities of the time.³⁹⁷ So what are the central elements of CSR for an educational institution?

Transposing the CSR concept onto educating for the twenty-first century elucidates the need to depart from traditional models of education toward the teaching of core skills like critical thinking, learning self-reliance, cross-cultural understanding, innovation, information management, and technological literacy.³⁹⁸ Educational institutions must ultimately educate graduates to contribute to the economic and social goals and SDGs to meet societal demands and find employment in a global market.

The UNESCO World Conference on Higher Education urged that the training offered by institutions of higher education should both respond to and anticipate societal needs. This includes promoting research for the development and use of new technologies and ensuring

³⁹⁶ A set of seventeen goals that build on the Millennium Development Goals and form one of the main outcomes of the Rio +20 Conference. The Sustainable Development Goals sit at the heart of the 2030 Agenda for Sustainable Development, adopted by all United Nations member states in 2015, and provide a shared blueprint for peace and prosperity for people and the planet, now and into the future.

³⁹⁷ M. A. L. Agudelo, L. Jóhannsdóttir, and B. Davídsdóttir, 'A Literature Review of the History and Evolution of Corporate Social Responsibility', *International Journal of Corporate Social Responsibility*, 4(1) (2019), Article 1.

³⁹⁸ B. Trilling and C. Fadel, *21st Century Skills: Learning for Life in Our Times* (Hoboken, NJ: Jossey-Bass, 2009).

the provision of technical and vocational training, entrepreneurship education and programmes for lifelong learning.³⁹⁹

Digging deeper, it is not just what discipline is taught that is important: how it is taught is of equal importance. The modus operandi of learning these skills is the focus of this chapter: more specifically, how academic integrity, and the mechanisms for its management, contribute to corporate responsibility of the institution and in larger society to deter corruption. Academic integrity in all its dimensions is a central tenet of learning. Academic dishonesty does not have a universal definition, as institutions in different regions conceptualize academic honesty and its transgressions differently.

Integrity, which should be at the heart of knowledge, and its management are more often than not ‘confined to regulations that no one reads before a transgression’.⁴⁰⁰ This does not serve a holistic system of academic integrity inside or outside the institution.

A second tenet of an optimal learning environment is a safe setting where students, researchers, and faculty feel safe to make mistakes and are able to speak up about inequities at all levels of an academic institution. This is contingent on trust and confidence in a system that is fair and just and has no adverse consequences for the individual reporting academic integrity violations. However, the management of education at the secondary and tertiary/university level has reoriented toward a for-profit, privatized model, eroding many traditions. Academic integrity appears to have become a collateral casualty of this evolution.

³⁹⁹ UNESCO, *2009 World Conference on Higher Education: The New Dynamics of Higher Education and Research for Societal Change and Development; communiqué—UNESCO Digital Library* (Paris: UNESCO, 2009), p. 10.

⁴⁰⁰ M. Bergadaà, *Le temps: Entre science et création* (Caen: Éditions EMS, 2020).

Our education systems, however, are rooted in patriarchal and hierarchical origins. This power dynamic of hierarchy impacts the structures created and mechanisms in place to manage academic integrity. Solutions to the issue of optimizing academic honesty in a safe learning and research environment lie in prevention, safe reporting channels, and fair resolution of conflicts. Ultimately, we must examine the predominant organization culture in education and consider whether it currently serves future generations. This chapter will explore factors that have influenced the evolution of attribution and academic integrity, as well as their management, in our educational institutions in the context of optimizing corporate social responsibility in the twenty-first century in academia and society at large, including the generation of shared value.⁴⁰¹

2. Academia and the patriarchy: inherent power imbalances and their impact on society

Academia and institutions of learning date back in Africa to Morocco's al-Qarawinyin (859 CE), and Egypt's Al Azhar University in Cairo—a former madrasa that taught primary to tertiary education.⁴⁰² Europe's academic tradition evolved from the Christian monastic cathedral school, which originated in Ireland and spread throughout Europe hand in hand with Christianity.⁴⁰³ The *universitas magistrorum et scholarium* or 'community of teachers and scholars' then emerged, such as the University of Bologna in Italy, one of the oldest. Charlemagne's letter *De litteris colendis*, required that bishops select as

⁴⁰¹ Agudelo, Jóhannsdóttir, and Davídsdóttir, 'A Literature Review'.

⁴⁰² N. Saat, *Tradition and Islamic Learning: Singapore Students in the Al-Azhar University* (Singapore: ISEAS–Yusof Ishak Institute, 2018), chapter titled 'The Al-Azhar University: A Historical Sketch', pp. 15-33.

⁴⁰³ H. I. Marrou, *A History of Education in Antiquity* (New York: Sheed and Ward, 1956).

teachers men who had ‘the will and the ability to learn and a desire to instruct others’. The first universities therefore were rigorous, control-centered, male-only institutions. These traditions and ideas were imparted to the future kings, nobles, and elites of Europe, who would in turn shape many of the continent’s fundamental institutions and structures—including education for the next generation. They were patriarchal in nature and women were excluded. Very few women received an education in these institutions. One exception, Bettisia Gozzadini, daughter of a noble, became the first female law graduate in 1237 and later the first woman to lecture at the University of Bologna.⁴⁰⁴

Today some of these hierarchical characteristics are in evidence in our older education systems and universities. According to Professor Brian Martin, academic knowledge is influenced and shaped by patriarchy—in both form and content—in what he terms ‘masculine knowledge’. It is demonstrated in the choice of topics of inquiry, the emphasis on ‘objectivity’, the attempt to increase the status of academics in relation to outside groups, a culture of competition—such as the pressure to publish—and aggression. For example, the configuration of research papers ‘hides all indications of the actual practice of research, with its personal motivations, puzzles, mistakes sidetracks and flashes of illumination’.⁴⁰⁵

These patriarchal values of seeking achievement and competitive culture impact academic honesty in foreseeable ways and have wider effects on society.⁴⁰⁶

⁴⁰⁴ F. Matteucci and Raffaele Gratton, *Women in Italian astronomy*. Document prepared for INAF-Astrophysical National Institute, Italy, 2014), arXiv:1402.1952.

⁴⁰⁵ B. Martin, *Tied Knowledge: Power in Higher Education* (Self-published, 1998).

⁴⁰⁶ T. Kasser and others, ‘Some Costs of American Corporate Capitalism: A Psychological Exploration of Value and Goal Conflicts’, *Psychological Inquiry*, 18(1) (2007), 1-22.

The impacts of attribution on society were explored by Harold Love, who studied the evolution of attribution. He noted that lawyers, as well as clerics, had been concerned about attribution since the Middle Ages due to the proliferation of forged, defamatory, and libelous publications, which required proper attribution in order to determine culpability.⁴⁰⁷

One of the best-known examples of this kind of impact on society was the great forgery of the Donation of Constantine, a forged Roman Imperial decree by which Constantine purportedly transferred authority over Rome and the western part of the Roman Empire to the Pope. It was used to coerce the illiterate King Pepin the Short of the Franks (r. 751–768 CE) into giving the lands he conquered from the Lombards to Pope Stephen II (r. 752–757 CE). It was only finally proved a forgery by the scholarship of Lorenzo Valla, a priest (1407–1457 CE), who found the language used in the document dated from the eighth century and not the fourth century. The purpose of the document was evidently to justify papal territorial claims in an unorthodox manner by fabricating attribution to Constantine to perpetuate power and influence in society.⁴⁰⁸

According to Harold Love, in 1690, another cleric, Richard Simon, brought to light the fact that the *Iliad* and the New Testament were products of reconstitutive editing by individuals who had not met each other and, in fact, lived in entirely different times: ‘each patched up his predecessor’s work, dropping many stitches in the course of this sartorial process’.⁴⁰⁹ The implications for the discipline of literature and religious doctrine were profound.

⁴⁰⁷ H. Love, *Attributing Authorship: An Introduction* (Cambridge: Cambridge University Press, 2002).

⁴⁰⁸ G. W. Bowersock (trans.), *Lorenzo Valla, On the Donation of Constantine* (Cambridge, MA: Harvard University Press, 2007).

⁴⁰⁹ Love, *Attributing Authorship*, p. 26.

Today's attribution standards emerged within scholarly societies with codes for referencing pertinent to each academic subject or discipline, subsequently evolving into the referencing and citation practice we know today. Academic integrity, however, must be woven into the *modus operandi* of teaching and research and the fabric of the academic experience, and not exist as a mere appendage of rules.

3. A change in character: the implications of for-profit education

As management of education at the secondary and tertiary/university levels has reoriented toward a for-profit, privatized model, many core academic traditions have been eroded. New educational institutions have emerged, courses have multiplied exponentially, attracting a more socioeconomically and ethnically *diverse student body*. Leaders in academia are expected to be entrepreneurial managers. Tertiary education is becoming more global, with international collaborative research and cross-border funding of research activities characterized by partnerships between institutions.

The changing character of academia has brought with it increasing pressure on teachers, students, and administrators to meet accountability and performance demands and administrative deadlines, to innovate, and to garner grant funding in addition to publishing. Meanwhile, public funding for public institutions is under threat.⁴¹⁰

The 'fallout' is increasing pressure to cut corners, to aspire to higher grades, and to deliver cutting-edge research using the easiest path, transgressing against academic integrity in the process.⁴¹¹ Moreover,

⁴¹⁰ UNESCO, *Global Education Monitoring Report, 2019: Migration, Displacement and Education: Building Bridges, Not Walls* (Paris: UNESCO, 2019).

⁴¹¹ D. L. R. Jones, 'Academic Dishonesty: Are More Students Cheating?', *Business Communication Quarterly*, 74(2), 141-50.

faculty have less time to enforce or police academic honesty, while adjunct faculty are unpaid and expected to address these issues without remuneration. All have time constraints, some perceive that it is not their job, and others have ideological objections to sanctions. Taken together, all of this erodes the fabric of values that encases academic tradition.⁴¹²

According to Horbach and others, reasons for academic integrity violations, aside from personality factors, include the organizational culture of the institution, competitive research funding, and ‘publish or perish’ pressures.⁴¹³

3.1 The Rylander Case

The Rylander case, which emerged at the University of Geneva on 29 March 2001, was demonstrative of the ineffectual management of integrity complaints, and its significance reverberated through academia worldwide. Professor Ragnar Rylander, who was attached to the Faculty of Medicine at the University of Geneva, chaired symposia funded by the tobacco industry for twenty-five years. He published work in the same vein, with the express purpose of refuting the conclusions of

⁴¹² E.-J., Park, S. Park, and I.-S. Jang, ‘Academic Cheating among Nursing Students’, *Nurse Education Today*, 33(4) (2013), 346-52.

⁴¹³ S. P. J. M. Horbach and others, ‘On the Willingness to Report and the Consequences of Reporting Research Misconduct: The Role of Power Relations’, *Science and Engineering Ethics*, 26(3) (2020), 1595-623; M. S. Anderson and others, ‘The Perverse Effects of Competition on Scientists’ Work and Relationships’, *Science and Engineering Ethics*, 13(4) (2007), 437-61; E.-M. Forsberg and others, ‘Working with Research Integrity—Guidance for Research Performing Organisations: The Bonn PRINTEGER Statement’, *Science and Engineering Ethics*, 24(4) (2018), 1023-34; D. Fanelli, R. Costas, and V. Larivière, ‘Misconduct Policies, Academic Culture and Career Stage, Not Gender or Pressures to Publish, Affect Scientific Integrity’, *PLoS ONE*, 10(6) (2015), Article 18; D. Sarewitz, ‘The Pressure to Publish Pushes Down Quality’, *Nature*, 533(7602) (2016), Article 147.

established science that highlighted the risk of passive smoking. Jean-Charles Rielle, a doctor and politician and the whistleblower in this case, published documentation and evidence on an Internet platform created in 1996 so the public could determine the truth.

Rylander was subject to two successive commissions of inquiry by the University of Geneva's senior management/rectorate. The first commission exonerated Rylander. Subsequently, as is common in Switzerland, Rylander filed a libel suit against Rielle and his colleague and fellow anti-tobacco campaigner, Pascal Diethelm, and the whistleblowers were found guilty at first instance in 2003. Upon appeal, the Swiss Court of Justice, in its judgment of 15 December 2003, vindicated Diethelm and Rielle. The rationale stated that the whistleblowers had indeed provided proof of their valid claims against Rylander. Thus, the formal proof that Rylander had been paid by the tobacco industry changed the trajectory of the case. It catalyzed the second commission of , which reached an opposite conclusion to the first inquiry.

According to Bergadaà's incisive analysis of the case, management used patriarchal tactics during the first commission of inquiry. They included selecting non-independent members of the commission and generic terms of reference for the first commission of inquiry. Three deans from different faculties (science, economics, and law) were selected because they could be relied upon to defend the university's reputation at any cost. Moreover, in their conclusions, they employed the standard legal tactic of using a statute of limitations to relieve the University of Geneva of its responsibility in the scenario.⁴¹⁴

Bergadaà's analysis of the Rylander case is instructive in the context of the reciprocal duty between our academic system and civil society and the CSR germane to the case. She maintains that, to understand how an organization as a whole behaves, it is necessary not only to recognize

⁴¹⁴ Bergadaà, *Le temps*.

the elements that compose it, but also their relations and interactions with the environment and larger society. In the Rylander case, the economic and legal stakes for the tobacco industry were significant.

Bergadaà concludes that the university's responsibility in the Rylander case can be measured in the number of deaths due to passive smoking over eighteen years (1983–2001) that were a direct consequence of the university's failure to exercise CSR. Three lessons can be drawn from the case: first, a disturbing number of alerts were raised between 1983 and 2001 without any reaction. Second, none of the whistleblowers were protected, nor were there mechanisms in place to protect members of the academic community who reported in good faith. Paradoxically, this was a recommendation of the University of Geneva's first commission of Inquiry. Third, the global reputation of the University of Geneva was damaged by its denial, including maintaining silence, or *omertà*, as Bergadaà calls it (i.e. the Mafia code of silence), given the weight of the published evidence.

Professor Bergadaà's analysis is illustrative of how power dynamics affect CSR in academia and larger society. It highlighted the fact that impunity will reign in a system, in academia or anywhere else, which sees its own longevity as its paramount objective.

The integration of CSR plays a central role in the deterrence of corruption inside academic institutions in the defense of integrity and outside in society at large. According to Transparency International, corruption, bribery, theft, tax evasion, and other illicit financial flows cost developing countries \$1.26 trillion per year across the Middle East, and North Africa. In India, almost half of all workers think bribery and corruption are acceptable if there is an economic downturn.⁴¹⁵

The trend to transgress against CSR, to break the rules for profit in corporations and civil society institutions adopting this management

⁴¹⁵ Transparency International, *2019—Corruption Perceptions Index* (Berlin: Transparency International, 2019).

style, has created multiple scandals brought to the attention of society by whistleblowers, including the Enron affair and the Snowden and Manning revelations of the US Government's surveillance of its own citizens.

One of the most devastating corruption-related crises for the global economy in which academia was implicated was the 2008 financial crash. According to Charles Ferguson, Harvard University and its former president, Larry Summers, and Columbia University and Glenn Hubbard, Dean of the Business School, among others, were complicit along with key Democratic politicians in the planned deregulation of the financial industry by providing a revolving door for a 'predatory elite' that took over 'significant portions of economic policy and of the political system, and also, unfortunately, major portions of the economics discipline'.⁴¹⁶

More specifically, according to Ferguson:

What you find is that very prominent professors of economics, often people who have also held high government posts, are paid to testify in Congress. They are paid to be expert witnesses in both civil and criminal trials. They're often paid to write papers that praise the financial services industry and argue on behalf of deregulation of the industry. They make millions, in some cases tens of millions, of dollars doing this. And this is usually not disclosed. And in fact, university regulations do not require disclosure of these payments.⁴¹⁷

⁴¹⁶ C. H. Ferguson, *Predator Nation: Corporate Criminals, Political Corruption, and the Hijacking of America* (Illustrated edition) (New York: Currency, 2013).

⁴¹⁷ 'A Searing Look at Wall Street in "Inside Job"' [interview transcript], *NPR*, 1 October 2010.

In 2020, revelations of corporate corruption continued to emerge at record levels in society at large, financial institutions, big ‘pharma’, and the procurement industry. Some examples include French-based Airbus settling out of court for a record \$4 billion in fines for alleged bribery and corruption over fifteen years regarding the use of a global network of ‘middlemen’ for corrupt transactions such as commissions to boost airplane sales.⁴¹⁸ Novartis, the Swiss pharmaceutical company, paid \$1.3 billion in a settlement for kickbacks, bribery, and price-fixing for incentivizing doctors to prescribe its drugs, by offering travel and hospitality.⁴¹⁹ Former Goldman Sachs executive Asante Berko was charged by the SEC in 2020 for paying \$2.5 million initially and \$42 million over the following five years to a Ghana-based intermediary, to bribe Ghanaian government officials in order to secure approval of an electrical power plant project.⁴²⁰

The relationship between academic honesty and complicity in corruption in society at large requires more research. Academic dishonesty is, however, on the rise according to numerous studies.⁴²¹ The 2017 Kessler International survey highlighted that ‘79% of students admitted to plagiarizing their assignments from the internet, 42% purchased custom papers online, and 28% said they had a service take their online classes for them.’⁴²²

A casualty of this evolution is academic citizenship, which comprises the values, attitudes, and activities of service embraced in

⁴¹⁸ T. Hepher, and L. Frost, ‘Airbus Bribery Scandal Triggers New Probes Worldwide’, *Reuters*, 3 February 2020.

⁴¹⁹ A. Liu, ‘With New Settlement, Novartis Has Shelled Out \$1.3B for Kickbacks, Bribery and Price Fixing This Year’, *FiercePharma*, 2 July 2020.

⁴²⁰ Cassin, H., ‘SEC Charges Former Goldman Sachs Exec with “Egregious” FCPA Violations’, *The FCPA Blog*, 14 April 2020.

⁴²¹ Jones, ‘Academic Dishonesty’.

⁴²² Kessler International, ‘Survey Shows Cheating and Academic Dishonesty Prevalent in Colleges and Universities’, *Cision PR Newswire*, 6 February 2017.

academic life and the wider civic mission of the university.⁴²³ The pastoral community building which held academic communities together in a bygone age is under threat. ‘The intertwining of participation in, engagement between, and mutual responsibility of, universities and society’ is eroding in our fast-paced world.⁴²⁴

This literature indicates that ‘important drivers of misconduct range from individual personality traits to systemic factors, which include productivity pressure and corporate influences’.⁴²⁵

According to statistics, academic integrity could foreseeably become an endangered species as corruption increases in our academic institutions and in the wider society.

4. Unsafe mechanisms to report breaches of academic integrity and lack of independence

There are numerous reasons for the failure to attribute properly, spanning the whole range of human motivation from blatant cheating to oblivious error. The systems in place to manage disputes and complaints have traditionally been inadequate and problematic, as demonstrated in the Rylander case. Of central importance to all institutions are safe

⁴²³ B. Macfarlane, ‘Defining and Rewarding Academic Citizenship: The Implications for University Promotions Policy’, *Journal of Higher Education Policy and Management*, 29(3) (2007), 261-73; B. Macfarlane, *Researching with Integrity: The Ethics of Academic Enquiry* (London: Routledge, 2008); J. Nixon, *Towards the Virtuous University: The Moral Bases of Academic Practice* (New York & London: Routledge, 2008).

⁴²⁴ R. T. Nørgård and S. S. E. Bengtsen, ‘Academic Citizenship Beyond the Campus: A Call for the Placeful University’, *Higher Education Research and Development*, 35(1) (2016), 4-16 (p. 4).

⁴²⁵ Fanelli, Costas, and Lariviere, ‘Misconduct Policies’; S. P. J. M. Horbach and W. Halfman, ‘The Extent and Causes of Academic Text Recycling or “Self-Plagiarism”’, *Research Policy*, 48(2), 492-502; Horbach and others, ‘On the Willingness to Report’ (p. 1596).

reporting channels and protection against a culture of retaliation. Regrettably, hierarchical institutions like universities create complaints systems to manage these issues that face inherent conflicts of interest since they lack independence. This is not unique to academia but is a common characteristic of other hierarchical systems such as the military, international organizations, and corporations. Ignorance of formal reporting channels, power disparities, cultural imperatives, poor design of reporting mechanisms, and lack of independence of those mechanisms are some of the underlying reasons why problems and disputes fester without solutions.⁴²⁶

According to Brian Martin, formal complaints that do find their way to an internal manager, committee, or human resources unit are unlikely to receive a favorable outcome for those in a position of less power.⁴²⁷ Official channels usually favor people with more power, are slow, and operate according to rules and procedures rather than fairness. If a complaint is rejected, the supervisor's behavior is given a formal stamp of approval. In the 2020 Sorbonne plagiarism scandal, where justice was achieved via the disciplinary section of the academic council of the University of Paris 1 Panthéon-Sorbonne, a decision dated Tuesday, 21 July 2020, ruled that the diploma Arash Derambarsh was granted in

⁴²⁶ C. Hunt-Matthes and P. A. Gallo, 'The UN Whistleblowing Protection Gap: Implications for Governance, Human Rights and Risk Management', in *Selected Papers from the International Whistleblowing Research Network Conference, Oslo, June 2017*, ed. by D. Lewis and W. Vandekerckhove (London: International Whistleblowing Research Network, 2017), Paper 4; Horbach and others, 'On the Willingness to Report'.

⁴²⁷ B. Martin, *Official Channels* (Sparsnäs, Sweden: Irene Publishing, 2020).

2015 should be withdrawn.⁴²⁸ The fact that the Sorbonne's response has been silence does nothing to reinforce academic integrity.⁴²⁹

4.1 Unsafe reporting mechanisms and retaliation

There is a lack of research on the processes involved in reporting alleged misconduct. Horbach and others conducted one of the first studies in 2020, which confirmed that power relations are a key determinant in reporting a violation of academic integrity.⁴³⁰

Disputes typically arise within the context of a wider breakdown in the relationship between early career researchers and their supervisors, where cordial relations with a supervisor are almost a prerequisite for research work.⁴³¹ Aside from student plagiarism, divergences in judgment and failure to attribute by a supervisor can be at the core of a conflict. Characteristics of academic disputes can include retaliation in the form of reputational damage and intimidation in relation to future grants, academic collaboration, and work opportunities.⁴³²

Lack of transparency fosters an environment where abuses of power can take place. The research environment is often closed and confidential, with the research team accountable to the supervisor and the guardians of information about the initiation of ideas and actual levels of individual contributions. Such research environments are ripe

⁴²⁸ Y. Bouchez and C. Stromboni, 'L'annulation d'une thèse pour plagiat déstabilise l'université Paris-I - Panthéon-Sorbonne', *Le Monde*, 27 July 2020.

⁴²⁹ M. Leplongeon, 'Arash Derambarsh perd une bataille devant le Conseil national de l'enseignement supérieur', *Le Point*, 16 December 2020.

⁴³⁰ Horbach and others, 'On the Willingness to Report'.

⁴³¹ Martin, *Official Channels*.

⁴³² J. P. Near and M. P. Miceli, 'After the Wrongdoing: What Managers Should Know about Whistleblowing', *Business Horizons*, 59(1) (2016), 105-14; Hunt-Matthes and Gallo, 'The UN Whistleblowing Protection Gap'; Martin, *Tied Knowledge*; Martin, *Official Channels*.

for exploitation by unscrupulous supervisors: in fact, 40% of researchers reported lifting of their ideas in 2020.⁴³³

In addition, retaliation can take the form of minimizing contributions to research projects or the complainant with less power being ‘labelled as ungrateful, egotistical, difficult, misguided or any of a wide range of other derogatory terms’ by the violator of academic honesty. This tactic of retaliation can operate to discredit individuals who speak truth to power. Moreover, retaliation can result in loss of scholarship or sabotage and blacklisting with regard to future opportunities for a victim who reports in good faith. Conversely, students who are complicit in exploitative practices may be promised help in furthering their career in the form of support for grant and job applications.⁴³⁴ Bergadaà has reported retaliation in her role as dispute mediator at the Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA); for instance, she was threatened by the president of a university in France because she had defended independent, rigorous research plagiarized by dishonest senior researchers. She also attests to an endemic culture of retaliation in academia: ‘The problem of the university lies less in the theft of its production than in the behavior of a few who attacked the complainant by circulating a dossier sent to a large number of officials to destroy his reputation’.⁴³⁵

A third mode of retaliation is reinterpretation of facts by supervisors, who misrepresent their own contributions to research or place blame on a third party further up the hierarchy for decisions about co-authorship. Finally, some supervisors demand co-authorship simply for being supervisors, regardless of their input. ‘Exploitation can be so highly entrenched in some academic cultures that it is treated as standard

⁴³³ Horbach and others, ‘On the Willingness to Report’.

⁴³⁴ Martin, *Official Channels*.

⁴³⁵ Bergadaà, *Le temps*.

practice’—a culture that Brian Martin labels institutionalized plagiarism.⁴³⁶

Given the culture of our institutions—the fact that whistleblowers are not protected—it is therefore necessary that members of the academic community be insulated from retaliation. Specifically, those with less tenure are less likely to report:

The crucial hurdles for not reporting are these researchers’ concerns that this may harm their career and their expectation of not being taken seriously, both of which are rooted in power relations and hierarchical differences leading to resource dependence.⁴³⁷

According to Bergadaà, in such circumstances, some people have no choice but to take legal action in courts when internal academic integrity complaints mechanisms fail. Success is never guaranteed; contingent on the legal jurisdiction, the law may only recognize counterfeiting, Justice is cumbersome, costly, and lengthy. The victim must bear the weight of the proceedings alone and will rarely recover the time and money spent on the case.⁴³⁸ Thus, the academic and legal orders conspire together as patriarchal systems against those with the least power.⁴³⁹

5. Inconsistencies in the world of work and in other cultures

Specific and general deterrence is the aim of academic integrity and the philosophy behind current mechanisms in place to manage sanctions for academic integrity. In practice, however, current research indicates that effective measures are only partial.

⁴³⁶ Martin, *Official Channels*.

⁴³⁷ Horbach and others, ‘On the Willingness to Report’.

⁴³⁸ Bergadaà, *Le temps*.

⁴³⁹ Hunt-Matthes and Gallo, ‘The UN Whistleblowing Protection Gap’.

The most effective deterrent is a high certainty of consequences, which is the case for most rules in place for students in tertiary education. However, different standards exist in society at large.

How does our management of academic integrity protect society or deter future incidences of non-attribution or improper attribution when the practice of non-attribution for ideas and speeches is commonplace in the larger society? This is in evidence in the world of work, politics, international organizations, and corporations. Winston Churchill was a rare politician who wrote all his own speeches. Almost all politicians employ speechwriters; Ted Sorenson and Peggy Noonan were speechwriters for Presidents Kennedy and Reagan, respectively, and their work was never attributed to them. International organizations and corporations use speechwriters as a matter of course.

In society as a whole, there are no sanctions for such non-attribution; in fact, it is considered a best practice in some quarters. Therefore, a more coherent approach is required across society and academia, a common vision inside and outside our institutions embracing a global commitment to proper attribution.

The issue is exacerbated and becomes more complex when consideration is given to the cultural appropriateness and proportionality of sanctions. Within our multicultural educational institutions management of academic honesty is interpreted very differently in different places. Asian culture, for example, subordinates the individual interest to the collective interest. 'For students from a society where individualism is frowned upon and students may study by copying information from experts, academic honesty as defined by a host institution may be a difficult concept to grasp'.⁴⁴⁰

⁴⁴⁰ Q. Gu, 'Variations in Beliefs and Practices: Teaching English in Cross-Cultural Contexts', *Language and Intercultural Communication*, 10(1) (2010), 32-53; H. Y. Kim, 'International Graduate Students' Difficulties: Graduate Classes as a Community of Practices', *Teaching in Higher Education*, 16(3)

This paradox of larger societal divergences with regard to attribution is inconsistent with the shared values that should encompass CSR and require coherence and further research.

6. A way forward: some best practices for csr and academic integrity

Academic corruption predictably fosters societal corruption and erodes the fabric of rich and poor countries alike. Capacity building through networks and organizations fostering greater North-South collaboration are an imperative. There are several best practices to consider for the future.

6.1 Prevention and academic integrity culture

Change requires inspirational leadership to frame academic integrity as a positive behavioral norm. Research confirms that faculty are reluctant to manage failings in academic integrity for a host of reasons. Incentives must be found to change this culture.⁴⁴¹ Creating an ethical academic culture requires visible, dedicated role models who communicate clear expectations, provide ethical training, reward compliance, and sanction violations. IRAFPA maintains that a prerequisite for this culture is for academia to be held accountable for its actions.

(2011), 281-92; I. Leki, 'Negotiating Socioacademic Relations: English Learners' Reception by and Reaction to College Faculty', *Journal of English for Academic Purposes*, 5(2) (2006), 136-52; M.-T. Liao and C.-Y. Tseng, 'Students' Behaviors and Views of Paraphrasing and Inappropriate Textual Borrowing in an EFL Academic Setting', *Journal of Pan-Pacific Association of Applied Linguistics*, 14(2) (2010), 187-211.

⁴⁴¹ There are limitations to relying on the faculty to police academic dishonesty: some 40% of professors 'never' report cheating, 54% 'seldom' report cheating, and a mere 6% act on all cases of academic misconduct that confront them.

6.2 The creation of safe spaces such as writing centers

According to Buranen, writing centers are an innovation where students learn skills that contribute to academic integrity without fear of reprisal for mistakes. In these settings, students work with dedicated tutors to improve technical citation and summarizing abilities; the result is greater student engagement and learning gains.⁴⁴² Additionally, this helps to manage the expectations of students from diverse backgrounds, and such spaces have been heralded as successes.

6.3 Safe reporting channels managed independently

Power imbalances must be considered in the design of complaints mechanisms.⁴⁴³ Given the retaliatory culture of our institutions and the lack of protection for victims reporting problems, it is imperative that members of the academic community be protected following the filing of a complaint. Such mechanisms must be independent and free from influence by senior management. The interest in protecting the reputation of the institution over justice for the victim must not prevail. The protection of whistleblowers in the academic environment is a prerequisite to academic integrity.

6.4 Modified honor codes

Donald L. McCabe and Linda Klebe Treviño are two experts in the field of academic integrity who have researched modified honor codes that put students in charge of the management and due process of integrity complaints, making it clear that it is the students' responsibility

⁴⁴² L. Buranen, 'A Safe Place: The Role of Librarians and Writing Centers in Addressing Citation Practices and Plagiarism', *Knowledge Quest*, 37 (2009), 24-33; Cooke, R., and C. Bledsoe, 'Writing Centers and Libraries: One-Stop Shopping for Better Term Papers', *The Reference Librarian*, 49(2) (2008), 119-27; T. Fulton, 'Creating Synergies with Collaborative Ventures', *Computers in Libraries*, 32(12) (2012), 12-18.

⁴⁴³ Horbach and others, 'On the Willingness to Report'.

to stop cheating among themselves; at the same time, though, students still have proctored exams. This has had mixed results as a deterrent and more research is needed.⁴⁴⁴

6.5 Independent mechanisms for resolution

The importance of an independent dispute resolution mechanism cannot be overstated. If not dealt with effectively, academic dishonesty will continue to resurface. IRAFPA advocates for an integrated concept of academic social responsibility and mediation, allowing parties to explore the issues underlying disputes. It is an optimal solution and resource based at the University of Geneva.

IRAFPA may serve a useful purpose in the future as an arbitration center, given that a neutral third party with expertise in the domain of academic integrity serves as a judge, who is responsible for resolving legal disputes, as opposed to filing in a court jurisdiction that has little expertise in academic disputes. The arbitrator is able to render a binding decision, replacing costly litigation.

6.6 New technologies

Several tools to aid in the detection of plagiarism and multiple publication have emerged. For example, one tool developed in 2006 by researchers in Dr. Harold Garner's laboratory at the University of Texas Southwestern Medical Center at Dallas is *Déjà Vu*, an open-access database containing several thousand instances of duplicate publication. The evolution of these technologies will hopefully serve the cause of academic integrity and CSR in the future.

⁴⁴⁴ D. L. McCabe and L. K. Treviño, 'Academic Dishonesty: Honor Codes and Other Contextual Influences', *The Journal of Higher Education*, 64(5) (1993), 522-38; C. A. Simon and others, 'Gender, Student Perceptions, Institutional Commitments and Academic Dishonesty: Who Reports in Academic Dishonesty Cases?', *Assessment and Evaluation in Higher Education*, 29(1) (2004), 75-90.

6.7 New international guidelines and a voluntary code on research integrity

Guidelines are being drawn up as a result of consultations at the Second World Conference on Scientific Integrity held in Singapore in July 2020. The initiative is intended to combat rising incidences of scientific fraud, plagiarism, and other research falsification and serve as a ‘guide for professionally responsible research practices throughout the world’. Global commitments foster CSR on this important issue.

7. Conclusion

As we consider corporate social responsibility as a lens through which to educate for integrity, we foresee that twenty-first century institutions and research agendas will become more collaborative and multicultural. A system of academic honesty and attribution must evolve to meet this need: ‘...the academic world must respect all sources who have contributed to their work, including civil society, offering appropriate consultation mechanisms and acknowledging the true spirit of cooperation in the production of knowledge’.⁴⁴⁵

A systemic paradigm shift placing CSR at its center is needed. Until then ‘those who stand to lose include citizens who pay taxes, the state which invests in education, private corporations, volunteers who contribute knowledge, publishers, students, and research grantees’. What is clear, however, is that universities must justify their actions by long-term convergence with the needs of the society and no longer simply by their place in an international ranking.⁴⁴⁶

Articulating concretely what corporate social responsibility of the tertiary education system means in practice requires a common vision inside and outside our institutions: a shared value, not just regarding

⁴⁴⁵ Bergadaà, *Le temps*.

⁴⁴⁶ Bergadaà, *Le temps*.

content, but a modus operandi of knowledge making. To achieve this, it is imperative to have a global commitment to academic honesty and proper attribution in wider society, in service to public integrity. The aim is to create and maintain a system of diverse, sustainable, high-quality academic institutions that are responsive to external demands and accountable for the outcomes they produce.

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KNOWLEDGE DELINQUENTS AND SEX OFFENDERS: SAME DIFFERENCE?

André Ciavaldini

Abstract

The article proposed by André Ciavaldini takes us to the shores of an often little known world, that of psychoanalysis. At the end of a very detailed analysis of the psyche of the sexual pervert and the 'manipulative' plagiarist identified by Michelle Bergadaà in her research, showing the analogy of behaviours (and their sources), he reveals that academic institutions are not equipped to spot and treat these manipulators. The author tells us that "plagiarism seems to be built on this conjunction: lack of self-esteem and the impossibility of accepting the reality of it, because it is too hurtful". There is therefore no reason why our institutions of higher education should not be less trapped in these perverse games than health care or religious institutions are by paedophiles.*

* Corresponding authors: A. Ciavaldini. To quote this chapter: Ciavaldini, A., "Knowledge Delinquents and Sex Offenders: Same Difference?" in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.419-434, DOI: 10.58863/20.500.12424/4273121 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

1. Introduction

As a clinical psychologist, specializing in the study and treatment of sexual offenders, it unexpectedly came to my attention while discussing matters of research with Professor Michelle Bergadaà that several of the distinctive traits she had identified in many plagiarists in her 2011 study were similar to those of the subjects that I saw in my practice, and more specifically some pedophiles.⁴⁴⁷ Bergadaà clearly identifies four different profiles of what she calls *knowledge delinquents*: the manipulator, the cheater, the fraudster, and the handyman.⁴⁴⁸ In this chapter, I will only deal with the first of these types: the manipulator. I will not take into consideration the individual components of a particular delinquent but focus on the characteristics that seem—to me—to be common to all.

The same thing is true of sex offenders: there are numerous ‘types’, in the sense that it is difficult to compare a violent rapist and a ‘gentle’ pedophile.⁴⁴⁹ However, our work has shown that, even though there is no typical profile for sex offenders, their personalities contain several permanent features that can be found consistently, but to varying degrees of organization, depending on the subject.⁴⁵⁰

⁴⁴⁷ M. Bergadaà, *Profils de plagieurs: Rapports d'analyse n° 1* (N° 2011-006) (Geneva: Université de Genève, 2011).

⁴⁴⁸ M. Bergadaà, *Le plagiat académique: Comprendre pour agir* (Paris: Éditions L'Harmattan, 2015)

⁴⁴⁹ For these distinctions between pedophiles, see D. Bouchet-Kervella, ‘Pour une différenciation des conduites pédophiliques’, *L'Évolution psychiatrique*, 61(1) (1996), 55-73.

⁴⁵⁰ C. Balier, ‘Pédophilie et violence. L'éclairage apporté par une approche criminologique’, *Revue française de psychanalyse*, 57(2) (1993), 573-89; A. Ciavaldini, *Psychopathologie des agresseurs sexuels* (original edition published in 1999) (Paris: Editions Masson, 2001); A. Ciavaldini, ‘L'agir violent sexuel’, in *Psychopathologie des limites*, ed. by C. Chabert (Paris: Dunod, 2009), pp. 233-79.

Thus, the ‘manipulator plagiarist’ identified by Bergadaà is an individual who moves about in disguise. They come up with multiple ruses and stratagems to craft their objects (plagiarism). Some seem to hide their missteps under a kind of arrogance. When their acts are discovered, they deny. They know how to surround themselves with a little court that they have personally enthroned and that ensures them a kind of immunity. They disdain common morals and shared ethics, preferring to make up their own rules, which they use and abuse, to the detriment of victims they practically never admit to having wronged.

It seems that, with this type of knowledge delinquent, as with sex offenders, we are facing the typology of people who build their identities on perverse modes of preservation and for whom division and denial reign supreme. That explains the incredible confidence of these subjects, who are hardly ever guilty of their crimes, which, in their view, should not even be defined as such, even though they may very well take part in denouncing them when other people are the offenders.

In the following sections, I will use my clinical experience with sex offenders to develop some suggestions for reading the psychic organization of manipulator plagiarists.

2. Wounded narcissism: the main (and hidden) flaw of self-esteem

The first thing one needs to understand is that manipulator plagiarists—like sex offenders—seem to have experienced a historical psychic development that has weakened them in their own narcissism, what is commonly known today as their ‘self-esteem’. Plagiarists neither love nor respect themselves. The reason they plagiarize is so they can be loved by their own narcissism. To make it simpler, let us say that they plagiarize in order to be able to love themselves. They respect ‘the greats’ (researchers) and the ‘intellectuals’, and wish they belonged and had access to this world that they have idealized. To be precise, they

would like to be esteemed and looked at (for looking is a very important element of plagiarism: it is about *seeing* perceptual material, even music) the way *they* look at ‘the greats’: with admiration. But they feel they lack the competence. Let us emphasize how internal and silent the wound is, skillfully hidden under a narcissistic ‘shell’ that often amounts to a false-self personality. Plagiarists play pretend; they are counterfeiters of their own lives. They embellish their story by stealing from others what they believe they do not have.

Like a child seducer, a plagiarist does not like the adult he has become. Pedophiles, for instance, only feel good around children. They adorn them with imaginary qualities from a green and infantile Eden: purity, charity, equity, lack of conflict, gentleness, beauty, etc. The child becomes their fetish.⁴⁵¹ Reality, however, is quite different. These subjects feel terribly ill at ease in the adult world, unable to find their place. They will therefore find a place where children become daily companions, objects of their environment: activity leader, youth worker, teacher, or even priest. The world of childhood is sought after because this is where pedophiles feel they belong, not noticing in any way that this feeling of belonging is due mainly to an adult-child asymmetry (which they deny), that puts children in a relationship of subjection they are not aware of, even though a pedophile will make every effort to seduce ‘the little ones’. They act, and through their actions they counterfeit the child, and the children are thrilled by the subterfuge, seeing a grown-up giving up his adult status to come down to their level. This is all masked by the reality of physical asymmetry that continues to affect the perceptual level (he is big, and strong, and an adult) and makes it impossible for the child to denounce the absurdity or funniness of certain situations of juvenile games that often end up in violent acts of a sexual nature (sexual touching, aggression, rape).⁴⁵²

⁴⁵¹ Balier, ‘Pédophilie et violence’.

⁴⁵² Ciavaldini, ‘L’agir violent sexuel’.

Manipulator plagiarists are therefore wounded in their narcissism, in two different ways. While one part of them says that they are not competent enough to do what is expected of them—this relates to the wounded narcissism—this very narcissism (the omnipotent part of it) despises them without their knowledge, expecting them to keep in line with the way they see themselves in the eyes of others. Plagiarism seems to be built out of this conjunction: a lack of self-esteem and the inability to accept the reality of the situation, which is too hurtful and therefore leads plagiarists to resort to something that will increase their self-esteem, that is to say plagiarism, data theft, and counterfeiting and, through that, the imaginary monopolizing of what other people are likely to possess, but not plagiarists, as they are deprived of part of their self-esteem.

3. Visual perception and self-esteem

In plagiarism, the question of sight seems to be at the center of the issue. In order to understand that, one needs to remember that the construction of narcissism is in thrall to visual perception. The way a parent looks at her child validates the child in his identity. The less this gaze bears the child's identity, which is still under construction, the more the child experiences this failure as linked to a flaw in himself. He thinks he is not 'good enough' to deserve the parent's commitment and his narcissism is built on a double modality. On the one hand, he feels hurt (he is not good enough to deserve a supportive parental gaze), and on the other hand, this very narcissism (etymologically linked to the myth of Narcissus, who died because he loved himself too much and got lost in his own image, an ideal vision of himself) produces a cruel defense mechanism: it demands that the subject be precisely what he cannot be, that is to say, what he 'imagines' (fantasy) he should be to attract the parental gaze. This puts us at the heart of an aporetic system where these subjects' narcissism is crushed by the expectations they

have of themselves and that they will ultimately transmit to others. The same is true of perverts. If they move about in disguise, it is simply that they cannot bear their internal wounds, with the ‘insane’ belief that if they are discovered, they will forever be banned from emotional connections and rejected by the world.

The dimension of abandonment is an element of the utmost importance for these subjects and is at the heart of plagiarists’ anxiety and fears. For the sake of convenience, at some point in their journey, they resort to plagiarism. In so doing, they get to retain their rank, and their narcissism can tolerate this infringement of ethical and deontological rules, thus allowing them to continue their career, easily confessing to plagiarizing if they are exposed (for the *handyman* type). If they realize what is going on, they may be assimilated to the *occasional delinquent* mentioned by Enrico Ferry.⁴⁵³ If, on the contrary, they intensify that quest to be seen and their search for power, they will become *manipulators*. If they are not exposed, they will offend again and a sense of impunity will gradually set in, not unlike what happens with sex offenders. The manipulator plagiarist will then develop a sense of omnipotence.

Bergadaà cites some excellent examples and accurately describes this assertion and the development these plagiarists are capable of, creating a true network of people who are in their debt and who will protect them, sometimes bordering on Mafia-like practices.⁴⁵⁴ This exact same profile can be found in some sex offenders, particularly

⁴⁵³ Enrico Ferry, like Cesare Lombroso and Raffaele Garofalo, was one of the founders of modern criminology. In his categorizations, which are no longer used today, except for historical background, he presented five classes of criminals: the *madman*, the *criminal by birth*, the *criminal by habit*, the *criminal by passion*, and the *occasional criminal*. Criminals in the last class only commit a crime if temptations arise; E. Ferry, *La sociologie criminelle* (trans. L. Terrier) (Paris: Éditions Alcan, 1893; 2nd edition, 1914).

⁴⁵⁴ Bergadaà, *Le plagiat académique* (pp. 117-22).

pedophiles, who know how to make themselves indispensable to the families whose children they will then abuse—so indispensable, in fact, that the parents will not be able to reveal the delinquent acts for a long time. Many of these offenders have been incorporated into social networks where they hold key positions, thus giving them means to pressure people, granting them access to young victims, and allowing them to muzzle those who could disclose their pathological and delinquent deeds.

4. The silence of institutional shame

Another element that seems to be very significant is the institution's reluctance to disclose and denounce. Is it possible that there is some kind of shame in revealing this delinquency of knowledge? Shame, which has a strong narcissistic component that every clinician is aware of, points to the fact that institutions—in this case academic institutions—may well be trapped in the same snare as educational, health care, and religious institutions when it comes to revealing the sexual aggressions that take place within their midst. Disclosure would mean agreeing to show the failures of such institutions in broad daylight, where human failure is often called connivance. Within these institutions, everyone knows that *Mr. So and So* engages dubious, questionable practices with children, but everyone keeps quiet. To keep quiet is to *close your eyes*. Once more, it is about visual perception, or in this case the lack of it: *pas vu, pas pris*.⁴⁵⁵ Disclosure means having to confess what you have seen, and that means explaining, putting things into words; it implies picturing what will have to be said.

This is where the 'slippery slope' sets in, for where will the subject find the components for this representation, if not in his own personal

⁴⁵⁵ A French expression that literally means 'if no one sees you, you won't get caught'.

repertoire, that is to say his life? This is an operation of nominative translation, from sight to spoken words, which amounts to dressing up the abuse with a personal story, making use of one's own psychological construct that has developed with the support of one's fantasies—not the fantasies of the adult one has become but the infantile fantasy world. Our psyche starts to shape itself as soon as we are born; infantile sexuality is not a myth. Freud and his numerous successors have shown the reality and efficiency of processuality in psychological construction. In our psyche, nothing is forgotten. The little 'polymorphous pervert' that each and every one of us has once been keeps popping up.⁴⁵⁶ Therefore, the revelation of sexual abuse confronts the denouncer with her own infantile fantasy life, where different positions collide: dominant/submissive, child/adult, molester/victim. This is first and foremost what those who see and keep quiet want to escape from. Then, of course, there is the disbelief of the people around them, which, in the end, is based on similar arguments.

Is the situation the same in the academic field? Is keeping quiet about what one has witnessed repeatedly for many long years (sometimes with embarrassment) based on individual motives shared by all? Not that every researcher wants to steal the work of others in order to enjoy an easily earned reputation and become, in the eyes of their peers, '*His Majesty the baby*', the idolized child, the product of combined parental narcissisms.⁴⁵⁷ No, this would be nothing but confabulation, except if, once again, the little polymorphous pervert present in each and every researcher (and in every human in general) stuck his little nose in (and everyone knows that to make it bigger, he

⁴⁵⁶ S. Freud, *Œuvres complètes Psychanalyse, Vol. VI: 1901–1905, Trois essais sur la vie sexuelle—Fragment d'une analyse d'hystérie—Autres textes* (Paris: Presses Universitaires de France, 2006), pp. 59-182.

⁴⁵⁷ S. Freud, 'Pour introduire le narcissisme', in *La vie sexuelle* (Paris: Presses Universitaires de France, 1969), pp. 81-105.

just needs to lie). The fact remains that plagiarism is a crime committed in aggravating circumstances as it always takes the victim by surprise. Most of all, it involves being ‘big’ without having been small, flying with somebody else’s wings. This wounding aspect of plagiarism cannot be resolved by the delinquent’s will alone. Just as the pedophile’s act injures the child he approaches in the guise of love, the plagiarist loves and/or despises the plagiarized, depending on the latter’s rank. Therefore, the mechanisms are in place and plagiarism becomes to the university what sexual abuse is to society as a whole.

5. Denial and division

This question of a narcissism that is poorly integrated and divided into two parts—one that attacks the ego in its own esteem and the other that demands that this ‘loss’ be repaired—is another characteristic of the sexual aggressor. All sex offenders build their personality with psychic defense mechanisms composed of denial, division, and projection.

Understanding this involves going back in time in the history of offenders’ psychological construction, probably long before their first years at university. Without delving deeper into this subject, which I have already outlined earlier, let us simply point out that it is the story of the construction of an internal gaze that is discovered here: a gaze that is absent at first, and that then becomes accusatory and tyrannical as the child lives and grows. Hence, delinquent acts (including plagiarism included) both mask and are the products of a psychological wound.⁴⁵⁸ This leads us to state that the plagiarist’s psychic organization seems to present similarities to the construction and defense of the sex offender and its perverse organization.

⁴⁵⁸ In this respect, plagiarism can be considered as a pathological act, like confabulation, mythomania, and sexual violence of a perverse nature, which is a component of paraphilias.

The first element that is worth noting in this denial is these subjects' assurance: they have *not* committed the crime they are accused of. *They* are the victims, it is a conspiracy, etc. When they are presented with the facts, they deny. Bergadaà wrote that it is evidence of a real weakness in their psychic apparatus that must be perceived here.⁴⁵⁹ One day, when faced with the task of writing something that is simply too complicated, they cannot bring themselves to publicly admit their limitations. This denial generates the split that leads the left hand to ignore what the right hand undertakes. One day, these individuals denounce those who commit the same crime as they have and another day they commit it themselves, without experiencing the slightest remorse.

If we rely on this kind of profile, the act of plagiarism, like the act of sexual aggression, comes at a point in the subject's life when he feels he is in danger, for reasons that may well be unknown to him and that are expressed in the thought that he will not be able to do what is expected of him. The offense then appears to calm the subject: once the dissertation, essay, thesis, article, or publication is handed in, the author can regain a form of inner peace. He has just escaped the worst: losing face in light of his narcissism, the reflection of which he can see in the eyes of others. This is where the projective activity of these subjects can be detected. How others see them is simply a projection of how they see themselves. This 'seeing' is distorted by the intransigence of their narcissism. Simultaneously, a feeling of exaltation fleetingly sets in: they have not been caught, and they have submitted their work. And yet, whenever a new request is made (and one surely will, since they are common in the academic world, with its evaluation requirements, as Bergadaà judiciously noted), the same feeling of dread will reappear. The same disease calls for the same remedy, which will again provide relief. If left unpunished, the feeling of omnipotence will, once again, pay tribute to narcissism. And so on and so forth in a never-ending spiral

⁴⁵⁹ Bergadaà, *Le plagiat académique*.

that did not go unnoticed by Bergadaà, who mentions her subjects' apparent addiction to their acts of delinquency, heightened by the relative impunity surrounding this particular delinquent activity, which will pull the plagiarist deeper into the zone of self-reinforcement.

Plagiarizing then seems to become a way of experiencing one's relationship to the world (the academic world among others). A double life begins: a social surface where the delinquent can enjoy her omnipotence, and a dark side where she disguises her plagiarism. The more she cheats, the less respect she has for herself and the more plagiarism becomes a way for her to attempt to restore what that very action has cost her. Plagiarism creates a reassurance that is somewhat less than the damage she has inflicted on her self-esteem. This is the possible starting point of a downward spiral that, in the case of some sex offenders, leads them to more and more serious acts until they get arrested or worse: commit rape or murder. The same phenomenon seems to exist for manipulator plagiarists, who keep increasing the scope of their plagiarism. The more they plagiarize, the more their self-esteem declines and the more they attempt to expand their social surface. That is how, for some of them, a kind of rush toward the abyss often begins.

For once the plagiarism has been committed, as with the sex offender, the crime is 'forgotten', at least until the next temptation, when the demon of narcissism comes back to haunt them. These subjects thus present a more or less temporary form of denial of their psychic reality, which is reflected in the denial of their delinquent reality. Admitting their crime would mean admitting the existence of an internal wound that the crime, in its own aberrant way, seeks to relieve. Therefore, denying a part of oneself, the part that is in pain, disables the ability to recognize someone else's suffering caused by the delinquent act that was meant to ease this internal pain. This explains these subjects' lack of empathy for their victims.

6. Can plagiarism be unconscious?

It seems possible that, over the course of a researcher's career, their reading notes may blend into a personal reflection, feeding it and helping it grow, but can we really claim that plagiarism may be unconscious, as some researchers claim? In Lagueux's article on the plagiarism committed by a professor at the Sorbonne, he wrote, 'there is nothing dishonest about the practice that is denounced here; it is completely innocent because completely unconscious'.⁴⁶⁰ How many times have I heard sex offenders say things like 'Really? I didn't know it was forbidden!' (a case of incest), or 'I swear it totally slipped my mind. I don't even remember doing it.' (sexual touching of a minor).

In this regard as well, the parallel with sex offenders can be enlightening. The argument of unconsciousness, of not knowing societal or even supernatural rules, is deplorably common. For example, the consumers or viewers of child pornography on the Internet often give the same type of justification at first. However, long-term therapeutic follow-up shows that, after therapeutic work that creates internal reassurance, an acknowledgement arises, and they can say that, in fact, they knew that it was forbidden or, in more discreetly, that it should not be done. This means that no sex offender, whatever he might claim at the time of his arrest or at the start of therapeutic treatment, is unaware of his deviation from societal rules. They all know that they have broken if not the law, at least a rule.⁴⁶¹

Certainly, Freudian slips can occur, and plagiarism committed 'in good faith' must surely exist as well in a form of cryptomnesiac

⁴⁶⁰ M. Lagueux, 'Un défi pour la pédagogie universitaire: Le plagiat inconscient', *Pédagogiques, revue de pédagogie de l'enseignement supérieur*, 4(1) (1983), 97-103.

⁴⁶¹ Here, one should not include offenders with developmental disabilities, even though many do have access to a form of minimal understanding of what is forbidden.

memory—let us not question this—but, as with sexual aggressions, let us not be seduced by complicity in the attraction of denial. Even Lagueux, when writing about ‘unconscious plagiarism’, concluded that the plagiarist is ‘the victim of a disease of our culture’. From that moment on, in his view, plagiarism becomes an ill that is inherent in university life. The manipulator plagiarist, in this case, is infected by ‘vanity’, which brings us back to the idea of self-destroying narcissism. Can one be vain without being aware of it? This is why this author leaves the reader with a beautiful example of Freudian slip in the final sentence of his article: ‘plagiarism [...] places the intoxicating illusion of thinking within everyone’s reach’. Can one get intoxicated unconsciously? Is it the alcoholic who creates the intoxication or the wine that he has drunk? *In coda venenum!*

7. A breakdown in transmission

Bergadaà explains that plagiarism constitutes a crucial violation of the ethics of research, in that it creates a kind of breach in the transmission of knowledge. By the illegal appropriation of ideas, concepts, and methods, plagiarism provokes a deviation in the trajectories of the construction of knowledge inasmuch as any ‘piece of knowledge’ is a historical product that has a conceptual relation that is directly linked to the personal story of the person who implements it. Although it is often said that ideas do not belong to anyone, the same ideas do not appear suddenly *ex nihilo*; they are woven into the development of a thought—a thought that gives perspective to the idea, which will then allow the latter to be projected into its future development. In terms of knowledge, the past is indebted to the future. Plagiarism destroys this potential: it clips the wings of the future idea, keeping only the plumage, which will inevitably fade over time.

The great majority of plagiarized ideas will unavoidably wither, separated as they are from their vital roots, and the same applies to

sexual violence. It alters transmission, even if in itself it is already an alteration in intergenerational transmission.⁴⁶² When a pedophile harms a child, society witnesses the murder of a future life. The transmission of human values is often eternally sullied; the growth of the child is disrupted forever. There is a reason why rape is a crime that warriors of all eras have used to destroy the transmission of identities, colonizing their future from the inside. Behind these practices, we can perceive humiliation of the victims, who see themselves dispossessed of part of their identity. If we are all concerned by the future of our knowledge society, how can we say that the plagiarist is less harmful—when it comes to identities—than the rapist, less destructive to the transmissions of the future than the pedophile?

8. A provisional conclusion: is plagiarism an identity patchwork?

As we reach the end of these reflections, it appears that plagiarism is a pathological act that—like other pathological acts—reveals a person who has a malady of narcissism. The sex offender presents a story constructed from traumatizing first relationships, whose main characteristics—as I have outlined here—have altered the construction of a unified Ego. Their personality, to take an image from Michel de M'Uzan, is built on a model of patchwork, which allows us to understand the split more as the effect of an original non-unification than as a secondarily built defense.⁴⁶³ It would not be incorrect to think that this is true of plagiarists as well—and not only manipulator plagiarists—but to a lesser degree. There is no plagiarism without a violation of narcissism. Thus, plagiarism signals an identity patchwork,

⁴⁶² Ciavaldini, 'L'agir violent sexuel'.

⁴⁶³ M. de M'Uzan, *La bouche de l'inconscient: Essais sur l'interprétation* (Paris: Gallimard, 1994).; Ciavaldini, 'L'agir violent sexuel'.

just like the personality of the plagiarist who, subconsciously, exposes his *disorder*, his unease, his pain to the world while hiding it. The plagiarist's fight—like the sex offender's—is a never-ending struggle to save himself from the wreckage of his narcissism. A silent scream. We now understand that institutional silence is the worst possible response: it is a kind of failure to assist a person in danger.⁴⁶⁴

Unable as I am to fully develop these remarks, which will seem terse to some readers, I have to say that our identities nowadays are more and more pulverized, atomized, as the notion of the self progressively gives way to the individual or, worse yet, the consumer. Our identities are watched permanently, in multiple ways, by communication tools and evaluation systems that have the power to assess their worth, particularly in the academic system. We are witnessing a plundering of our private lives, displayed for all the world to see on social media. We cannot live if we are not under the eyes of our peers, eyes that constitute a permanent and brutal rating system that leads us to *be* only what other people *see*. Is plagiarism not the response to this general pillaging of our private life, an aberrant way to back up our identities? Plagiarism would then be a constantly unsuccessful attempt at an identity transplant. But this idea opens up a real societal debate!

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⁴⁶⁴ This failure is punishable by law in France, but not in most English-speaking countries, where there is no general legal duty to rescue (or render assistance to) a person whose life or safety is endangered.

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USING PLAGIARISM DETECTION SOFTWARE: THE OTHER SIDE OF THE COIN

Nadine Eck

Abstract

The conclusions of this article are the result of a study conducted over three years, based on the expertise files that the author established as a scientific collaborator of the current IRAFPA. The use of similarity detection software was systematic for each case. The aim of this article is to demonstrate the absurdity of a persistent belief in universities: that it would be sufficient to call on the services of a computer services company specialising in so-called "anti-plagiarism" software to curb such cases. We will show, by example, what can and cannot be expected of them, and then we will compare the two most widespread in France, Urkund and Compilatio.*

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1. Introduction

Similarity detection software is essential to prevent the massive fraud that occurs in uncontrolled situations. These packages do not claim to make the phenomenon disappear by detecting all cases of plagiarism, even though their functionalities are progressing at the same pace as the plagiarists' tricks. For example, we have often heard people accused of negligence for not checking work that is the subject of a dispute say, 'The plagiarism detection software did not see any fraud, so the thesis or article is not plagiarized.'

This is often an illusion, as it is very easy to use simple free paraphrasing software to reword an entire text. Some sites offer text 'rewriting features' that can make plagiarism undetectable by software.⁴⁶⁵ Here again, only a specialist's analysis will be able to identify whether or not there is plagiarism by examining suspicious repetitions.

As for PhD theses, which are too long to paraphrase by this process, there are multiple specialized sites that clearly announce their intention: 'The paraphrasing service is a very special and sensitive service; for this reason, our linguistics team assists and provides the best paraphrasing service online. Plagiarism is bad and illegal. Worse, it can get you expelled! On our paraphrasing platform, you can benefit from the (best) paraphrasing prices...'.⁴⁶⁶

Let us be frank: when authors of works work undercover and are determined to deceive the reader, only a rigorous expert analysis can reveal plagiarism. This analysis must be carried out by a specialist in the discipline concerned: a reviewer for a scientific journal, an instructor, or a thesis director.

⁴⁶⁵ For example, Smodin, *Réécrire, reformuler ou reformuler du texte | changeur de mots gratuit | français*, 2020; Le Reformulator, *Reformuler, réécrire ou reformuler du texte | Changeur de vocabulaire...*, 2019.

⁴⁶⁶ Protranslate, *Service de paraphrase*, 2020.

For more than ten years, IRAFPA's analysis protocols have been guided by one mission: to enable the creation of a file that meets the requirements in terms of reliability, validity, and rigor that are indispensable to both investigative commissions and legal services that may be involved and, of course, to victims and whistleblowers. In the following pages, we describe the use we make—or do not make—of similarity detection software in the factual evidence files we compile at the request of claimants, victims, legal services, chairmen of commissions of enquiry, and whistleblowers.

2. The operating profile of knowledge delinquents

Plagiarists are like art forgers: they all have a specific *modus operandi* and, when we discover their style on a piece of work, they rarely change it. So our first job is to discover that *modus operandi*.

Thus, when a claimant sends us a list of texts declared to be plagiarized, a first analysis of the file consists in studying the admissibility of the claim on the basis of the evidence submitted to us. In the second step, the designated texts are subjected to software analysis, which in most cases allows us to detect other similarities. Exhaustiveness is not a necessary condition for a rigorous demonstration. Indeed, because the samples are representative of the whole text from which they are extracted, the results can be generalized to the whole text analyzed. A random search of samples is sufficient, especially when it concerns a work or an article of a certain length.

In order to establish the profile of the alleged plagiarist, we have defined the following five operating methods, together with Michelle Bergadaà.⁴⁶⁷ They allow us to unambiguously describe the nature of the

⁴⁶⁷ M. Bergadaà, *Le Plagiat académique. Comprendre pour agir* (Paris: Éditions L'Harmattan, 2015), pp. 57-59.

academic plagiarism observed and to make our reports as objective as possible.

Operating method 1: Textual repetition without elaborate masking. The main techniques used are verbatim plagiarism or copy-pasting of one or more sentences or expressions without quotation marks and without quoting the source; translation of texts written in a foreign language without quotation marks and without quoting the source; and summary of a text without quoting the author. In all three cases, however, the source author may be cited, but incorrectly referenced and/or cited in an inappropriate place, such as before the plagiarized passage or just at the beginning of it, so that readers think they are reading an original development when in fact they are reading plagiarized words.

Operating method 2: Masking process using simple or relatively complex techniques, which may be combined. The main ones are: reduction of the plagiarized text, partial summary, synonymy, and alternation of verbatim plagiarism and paraphrases; moving or interchanging words, expressions, propositions, or sentences (in the Molière style: '*Belle marquise, vos beaux yeux me font mourir d'amour*'/'*Vos beaux yeux, belle marquise, d'amour me font mourir*'⁴⁶⁸); moving a footnote into the body of the text (or vice versa), occasionally adding personal notes, small changes in the model (1850 becomes 1849), changing the tense, mood, or voice of verbs, changing the mode (affirmative, negative, interrogative) of a sentence; and referring to sources other than the plagiarized source—these other sources may themselves be plagiarized—so as not to arouse suspicion of plagiarism. These techniques are used when the source author is not cited or is cited inappropriately.

⁴⁶⁸ Beautiful marchioness, your lovely eyes make me die of love/Your lovely eyes, beautiful marchioness, of love make me die.

Operating method 3: Disguise using sophisticated techniques. In addition to the techniques listed under methods 1 and 2, more sophisticated techniques may be used to make plagiarism particularly difficult to detect. This involves making a mosaic using various compositional methods. One of the most common is to create a patchwork text (the length of a page, for example) made up of snippets of text borrowed either from several source authors or from various passages of the same source author located in different places. Conversely, a continuous text from one source author may be broken up into snippets scattered in various places in the plagiarized text, where it may even be combined with snippets from another source author. This artificial collage, made up of elements that are necessarily, to varying degrees, decontextualized and detached from their original logical arrangement, produces, at best, a clumsy, obscure, or partially incoherent text, and at worst, incomprehensible gobbledygook that can nevertheless fool readers with the glitter of enigmatic newspeak.

Operating method 4: Appropriation of the thought/expression of a renowned author. This is a kind of plagiarism that can take the form of a whole book. The plagiarist copies or paraphrases a renowned author whose thought processes and stylistic characteristics they have fully assimilated. This identical reproduction, on a scale that can be large, is done without indicating the source author and/or by displaying adherence either to the model copied or to the school of thought represented by this model (the plagiarist will say, for example, that he is ‘Bourdiesian’ or ‘Popperian’).

Operating method 5: Appropriation of non-literary data. This *modus operandi*, which can be practiced in all fields of knowledge, particularly affects the so-called ‘hard’ sciences. It consists of appropriating data of all kinds that do not fall within the scope of literary expression understood in the broad sense. These data include, among others, demonstrations, developments, passages formulated in specific

languages (mathematics, physics, etc.), diagrams, curves, graphs, tables, plans, illustrations, drawings, maps, photographs, etc. Masking procedures comparable to those used in methods 1 to 3 may be used. The source author is not cited.

3. Detection software: useful or a pipe dream?

It is easy to see that, of the operating methods described above, only type 1 plagiarism will definitely be detected; the software may potentially alert the user to a procedure under method 2. Similarity detection software is essential to prevent the massive fraud that occurs in uncontrolled situations, but it would be wrong to believe that such software is intended to eradicate the problem and steer knowledge delinquents who operate in our academic world back onto the ‘straight and narrow’, be they students or renowned researchers.

To be convinced of this, you just have to ask for a free trial, if your institution does not subscribe to one of the plagiarism detection software application. The procedure is generally as follows: you identify yourself by indicating your email address. You then receive your access codes, in order to use the document analysis service. You select one (or more) document(s) to be analyzed and/or compared. The document is loaded into the workspace available to you. The analysis of the document is launched according to the documents entered, as well as documents referenced on the Web, those saved by users of the software (with their agreement), and even publications for which some software applications have subscriptions.

The software’s response time varies greatly. In addition to the fact that some software works very fast (a few minutes) and others much slower (a few hours or even days for the slowest), the ‘weight’ of the documents to be analyzed and the method used are determining factors. Software to be installed on a personal computer should in theory work faster but it requires the computer to be switched on throughout the

analysis. On the other hand, online software analyzes the documents while the computer is switched off: everything happens remotely on the software's server.

We receive exhaustive and precise results such as the percentage of similarities of the analyzed document, the set of passages similar to other documents (highlighted in color), the exact references of the sources with similarities, and, finally, a list of similar sources sorted by probability.

The analysis work really begins with the results displayed by the software. For, on the one hand, similarity is not synonymous with plagiarism of protected works (legitimate quotations and some very common expressions, for example, are identified as similarities by the software, but obviously do not reveal an act of plagiarism); on the other hand, the presence of seemingly minor similarities does not mean 'absence of plagiarism'. And this is where the greatest confusion occurs. Many people do not need to do the checking work because the software did not detect anything. The percentage of similarities between the analyzed document and the sources found is, in fact, only an indicator whose importance varies according to the *modus operandi* used by the plagiarist.

The percentage of similarity is calculated according to the amount of *authentic* text compared to the amount of *similar* text found. Most software indicates which passages are similar so that one can judge for oneself whether they are quotations or plagiarism. Secondly, the software indicates which sources are found for each similar passage. Some tools even classify the most frequently found sources.

Some software builds its own database by indexing websites and documents found on the Internet or submitted by users. Other software programs are meta search engines: they do not build their own document database but query and centralize the results of the search tools available on the Internet. Finally, some software mixes these two technologies. In

all cases, content that is freely accessible on the Internet is detected. In order to have access to publications for which access is fee-based, anti-plagiarism software publishers must establish specific partnerships with the distributors of these documents.

When an analyst reads the result provided by the similarity detection software and finds that an extract is not plagiarized, but quoted, and also finds that many extracts come from sources that she herself has recommended to her students, what should she do? First of all, she needs to have access to an interface that allows her to modify the initial result. Depending on the technology used, some software allows the analysis results to be adapted and adjusted. It is possible, for example, to ignore a given source or extract and recalculate the percentage of similarities.

The analysis can be complemented, to a lesser extent, by the use of search engines, which can identify fraudsters, at least those who have taken advantage of their teacher's naiveté by copying easily accessible data. The truth is that search engines have significant shortcomings: they do not have access to the contents of sites offering to sell rewritten work in its entirety. Nor do they have access to password-protected pages. Finally, it is important to know that Wikipedia pages, for example, are regularly modified and that the software is not able to find deleted content. Furthermore, it is often enough, for example, to replace a single space with a double space between two words or, of course, to simply reverse the words for the search engine not to recognize a quotation. Thus, most software detects only plagiarized excerpts and not translated passages. Machine translation software exists, such as DeepL, which is based on artificial intelligence and is incredibly efficient.

Thus, if the work of educating people about citation ethics has not been carried out by the team of supervisors, colleagues, or editors in the publishing world, it is necessary to carry out an *a posteriori* assessment, based on the documents submitted or published. The work of a specialist in the discipline is then essential to detect anything that has fallen

through the cracks of the software. And the cracks can be quite wide, as we show below.

4. Assessment of software use in expert reports

IRAFPA regularly receives cases requesting expertise and mediation. In 2016, we compiled an exhaustive table of the cases investigated in order to determine the real value of similarity detection software. We used two programs, whose functionalities are described in section 5. Table 1 summarizes the fifteen cases we examined over a given period. For half of the cases analyzed, the similarity detection software was insufficient or inoperative. For the other half, the picture is mixed. Thus, whenever academic managers claim that their institutions have put in place integrity enhancement measures and mention the use of software as clear evidence, we can make this table available to them.

Table 1. Software evaluations of fifteen cases of potential plagiarism.

Case and discipline	Relative usefulness	Comments
Case 1: Medicine	Allowed plagiarism to be detected and proven	The software detected a significant percentage of the plagiarism as it was mainly verbatim plagiarism, from English to English.
Case 2: Law	Allowed plagiarism to be proven	The software detected a significant percentage of plagiarism since the plagiarism process consisted of frequent verbatim plagiarism in the same language, French.
Case 3: History	Allowed plagiarism to be detected	The software detected a significant percentage of plagiarism, as there was mainly verbatim plagiarism, from English

		into English. But the large number of sources and the long period covered by all the disputed texts made the examination very cumbersome, even with the support of the software.
Case 4: Computer Science	Allowed plagiarism to be detected	The software detected a significant percentage of plagiarism as there was essentially verbatim plagiarism. However, it did not detect plagiarized tables and graphs.
Case 5: History	Allowed plagiarism to be detected	The software detected a percentage of plagiarism from another source, which was cited, but incorrectly. The ‘mechanical’ analysis of an expert in the field revealed other frauds (invented data, falsified fieldwork, etc.).
Case 6: Law	Allowed plagiarism to be detected	The software detected sources of plagiarism, but the analysis had to be conducted ‘mechanically’ by an expert in the discipline, as paraphrasing was dominant and several source authors were used.
Case 7: Management	Use of two software programs that detected several plagiarized passages	The result given by the software had to be refined: a specialist analysis was needed to flesh out the corpus of plagiarized texts. Some of the plagiarized passages were cut by a few sentences or did not appear in the same order in the thesis and in the original article. Nevertheless, it was mainly verbatim plagiarism.
Case 8: Economics	The analysis by two software programs did not give convincing	The plagiarism involved quoting sources in an ambiguous way to create confusion between what was original and what came from

	results: very low rate of similarities	the source authors' research. This modus operandi, associated with the use of occasional masking (use of synonyms, paraphrases, change of verb tenses), is difficult for software to detect.
Case 9: Geology	The software produced inconclusive results	The plagiarism involved the translation of documents, and disguised figures and tables that are not detectable by similarity detection software.
Case 10: Sociology	The software produced inconclusive results	The plagiarism involved repetition of other people's ideas and paraphrases, but mainly self-plagiarism.
Case 11: Anthropology	Software did not work	Translation and/or paraphrasing of a French text into English: a process that cannot be detected by software.
Case 12: Literature	Software did not work	The plagiarized books and articles were not accessible on the Internet or were accessible through a paid service. The software does not give any results in this case.
Case 13: Finance	Software did not work	The plagiarism involved translation from French to English of part of the thesis, copy and paste for some tables, and manipulation and change of results for others. The software is not efficient when plagiarism involves translation or copying

		tables.
Case 14: Anthropology	Software did not work	The plagiarism involved translation from French to English, verbatim plagiarism, and paraphrasing. Apart from the verbatim plagiarism, these processes cannot be detected by similarity detection software.
Case 15: Geography	Software did not work	The plagiarism involved manipulation of maps and tables and modification of photos. The software does not take these elements into account.

Despite the obvious limitations, this kind of software is now a must. The question now is how can we best support researchers and teachers? In the following section, we will compare two programs that we have used.

5. For those who want more information: comparison of two programs

We would like to thank the two software publishers—Compilatio and Urkund—which kindly agreed to take part in the comparison and answer our questions.⁴⁶⁹

Compilatio is a French software.

In 2005, teachers in France expressed their needs for plagiarism control to the managers of Six Degrés, a company

⁴⁶⁹ The full table is available on the IRAFPA website:

<https://irafpa.org/en/methods/use-of-software-programs/a-comparison-test/>.

specializing in web design. The developers and the teaching staff brainstormed together on the solutions to be considered. Frédéric Agnès, one of the two partners at Six Degrés, decided to take on the project. The first version of Compilatio was released in 2008. In 2009, the team working on Compilatio created a new company of the same name, integrated into the Six Degrés holding company.⁴⁷⁰

Compilatio performs a three-level comparison: open-access Internet, documents deposited at your university, and documents deposited by all Compilatio users (respecting the confidentiality of documents). Depending on the wishes of the client organization, it is possible to add archives of student work from previous years or collections of documents that you can transmit via the software. Users can also add any document available to them to their own ‘reference library’ at any time. Compilatio can analyze all documents written in the Latin alphabet, in all languages, but it cannot compare texts from two different languages. However, Compilatio has been working on an algorithm for this purpose for several years.

With Compilatio’s license, there is no restriction on the number of documents whose content is in the ‘reference library’. However, there is a storage quota for the original files of the documents analyzed by the users, depending on the level of service chosen. It is possible to analyze as many documents as desired, without restriction in the context of individual use, in a normal academic context. Finally, Compilatio ensures confidentiality by offering the possibility to completely delete the documents of one’s choice, without allowing sharing or external access. For example, if one chooses to keep the content of student work confidential, Compilatio will not provide copies of documents to third parties.

⁴⁷⁰ A. Hamel, ‘Comment utiliser un logiciel anti-plagiat?’, *Thot Cursus*, 24 October 2011.

Urkund is a Swedish software.

Urkund was born in the academic world. A team of researchers had the idea of a networked service that could help them detect and deter plagiarism, hence the birth of Urkund in the autumn of 2000... Urkund has continued to grow and develop over the years and has become Sweden's leading anti-plagiarism service... Urkund is owned and developed by PrioInfo AB. PrioInfo is a company that has been meeting the demands and needs of information-intensive companies for over 25 years.⁴⁷¹ Urkund compares your documents with all the sources available on the Internet, 45 billion websites, the documents Urkund has already received, in the archives, about 17 million documents (as of 15 February 2016), the publications accessible on our partners' databases, i.e. 4,000 news sources, a database of more than 1,000,000 newspapers.⁴⁷²

Urkund can analyze documents in all languages that use the Latin alphabet 'and has the possibility to analyze Arabic, Mandarin, Hebrew'. However, it cannot compare texts from two different languages.

With the Urkund license, it is possible to analyze any number of documents and to support any number of users (teachers). An unlimited number of documents can be saved without size limits. Urkund ensures the confidentiality of certain documents by completely deleting them without allowing sharing or external access. If you choose to keep the content of student work confidential, Urkund will not provide any copies of documents to third parties. At the end of the contract, Urkund can return all data to the university and then destroy all stored files.

⁴⁷¹ In September 2020, Urkund became Ouriginal (a synthesis of Urkund and PlagScan). For more information on the merger between Urkund and PlagScan, see Ouriginal, *Our Story*, 2020; see also Urkund, *Le système Urkund*, 2020.

⁴⁷² Urkund, *Le système Urkund*.

5.1 Ergonomics

Compilatio is intuitive and easy to use, but offers fewer features than Urkund (e.g. simultaneous access to other sources where there are similarities). Urkund allows simultaneous access to many features on the same page, but its presentation is more complex and sophisticated.

5.2 Displaying similarities

With Compilatio, the text of the analyzed document and of the source appear in their entirety: similarities not recognized by the software and not marked in color can be detected by instructors during their analysis. The detection of paraphrases or sophisticated plagiarism is also facilitated by the fact that the two texts appear opposite each other. Words in bold (red color) mean that the similarities are exact. In contrast, with Compilatio not all verbatim sentence fragments are colored; the analysis requires more time. Also, some words shown in color are not verbatim plagiarism.

With Urkund, the display allows simultaneous access to other sources where the same similarities in a sentence have been detected. ‘Urkund always shows the best source on the page, the one closest to the text, but also refers to 5 other sources. These other sources are considered alternative and are indicated in the left margin.’⁴⁷³ In contrast, the text of the analyzed document appears in its entirety, but only the similarities detected in the source text appear opposite it. It is therefore not possible to know what the software did not recognize or what is a paraphrase: it is necessary to click on the source link to consult the original article. The analysis is therefore more time-consuming, especially as the two texts are no longer facing each other. The analysis is also less easy, as Urkund converts all characters to Verdana (this is the case, for example, for the detection of chapter headings): ‘During the analysis process, all italics, highlighting, and bold have their fonts

⁴⁷³ Translation from the URKUND Administrator Guide.

replaced by Verdana to facilitate single screen review. All tables and images that cannot be converted to text have also been removed.⁴⁷⁴

5.3 Similarity percentages

With Compilatio, the document submitted for analysis is broken down into a number of ‘parts’, depending on the length of the text submitted. Compilatio presents an overall percentage of similarities for the whole text, but also a percentage by ‘parts’. The percentages are given in relation to the document analyzed: 28% similarity, for example, means that 28% of the text contained in the document submitted for analysis was recognized as similar to the sources. For each source, a specific percentage is announced, which means that the analyzed document contains X% of text similar to that source. The set of similarities of an analyzed document is composed of the summed similarities for each source. It is possible to designate sources that you do not wish to take into account so that they are ignored when calculating the similarity percentage (to do this, simply check the selection box next to the desired source, then click on the ‘ignore’ button). All other sources, whether ‘very likely’ or ‘unlikely’, will be taken into account in the calculation of the similarity percentage (text areas that have the same similarities to several sources are only taken into account once). The result is a similarity percentage for each part and a similarity percentage for the whole document.

The advantage is that the selections made to refine the analysis (removal of sources or not) do not disappear after the software is closed. They can nevertheless be modified at any time by a simple click. Passages in quotation marks can easily be ignored for the calculation of percentages. In this case, simply answer the question: ‘Exclude text in quotation marks from the percentage of similarity.’

⁴⁷⁴ Translation from the URKUND Administrator Guide.

Note that with Compilatio, percentages, except in cases of verbatim plagiarism, are not indicative of the extent of plagiarism. They are only hints for further analysis—which is necessary—since paraphrasing, sophisticated verbatim copying, verbatim translation, and graphics, images, and non-textual data, on the whole, are not detectable by the software.

Urkund provides: (1) an overall percentage of similarity: 12% similarity, for example, in a 700-page text means that 12% of the document submitted for analysis is identical to all the sources found by Urkund; (2) a percentage for each source for which the software has detected similarities; and (3) within the same source, a percentage linked to each text extract where similarities have been detected. In the latter case, the percentage represents the degree of similarity, in detail, that the text shares with the source extract. This number helps to clarify the review process: 100% means that the text is identical to the source extract and 50% means that half of the words in the text differ in some way from the source extract. Similarities below 30% are not, in principle, highlighted. If a particular kind of information is considered irrelevant, it can easily be deactivated.

The overall percentage can be refined by ignoring pieces of text detected as similarities within the same source. However, although the result of the selections made (removal or otherwise of certain passages) can be sent by email, these selections disappear when the software is closed. If you save the Internet link, you can return to the selections made. Moreover, passages in quotation marks appear in color if you wish, but, in a passage including both verbatim copying and quoted passages, it is not possible to remove the parts in quotation marks so that they are no longer taken into account in the calculation of percentages.

It should also be noted that, with Urkund, percentages, except in cases of verbatim plagiarism, are not indicative of the extent of plagiarism. They are only hints for further analysis—which is

necessary—since paraphrasing, sophisticated verbatim copying, verbatim translation, and graphics, images, and non-textual data, on the whole, are not detectable by this software, just as they are not found by Compilatio. However, Urkund does show the words that differ between the two texts where the software has detected similarities (see section 5.6).

5.4 Detection of attempted manipulation by a fraudster

Compilatio can detect attempted manipulations, which are indicated by a pictogram. ‘Compilatio Support’ told us that new developments have been made to prevent the software from being bypassed, in particular the detection of unanalyzable text (triangle pictogram with an exclamation mark, which means that part of the document may potentially have been modified to avoid source detection). Urkund can also detect attempts at manipulation, which are indicated by ‘Warnings’. Warnings also detect the manipulation of spaces (with the addition of a blank letter, for example): ‘We are also testing a new function, so that we can show what is in parentheses in the texts analyzed.’

5.5 Analysis reports

Compilatio offers (1) a ‘summary’ tab of the report, which displays a general overview of your document, with the top sources (main sources found) and the corresponding similar passages. You can access the website directly by clicking on the source. (2) A ‘Full text’ tab: your document is presented in full with the similarities found. (3) A ‘Sources’ tab of the report displays all the sources that are similar to your document, sorted by percentage and by degree of relevance. Some sources are indicated as belonging to ‘another user’: these are sources submitted by authors who have opted for anonymity or ‘external sources’, that is, documents from a *Compilatio* user outside your university. To preserve the desired anonymity, the data are encrypted, but *Compilatio* does show similar parts of the texts. This display is a

great help in the case of substantial plagiarism, especially since it is possible to obtain access to the document via Compilatio's services. The procedure is as follows: send Compilatio certain information (account name, file name, document name, source concerned), then wait until the person agrees to transmit the source in question and contact you, after Compilatio services have communicated your contact details.

The *Urkund* report presents the text of the document submitted for analysis with the similarities and source references transcribed in color at the point in the text where these similarities were detected. The corresponding percentages are also indicated. When two samples of similar texts appear side by side, the software provides the possibility of visualizing, in detail, the differences between the two texts. This is the case, for example, for words that are not found in one of the two texts, or differences in tense or synonyms, for example:

when the *Show detailed text differences* button is *on*, the differences are indicated on the source side, in the form of colored rectangles (highlighting) on the words that differ from the document under review. This happens, for example, when a word is missing from the source but present in the document: here, the colored rectangle is empty or, if there is one or more sentences in the examined document that are not present in the source, or the presence of one or more words in the source which are absent from the examined document; it also occurs when there is a word in the source that also appears in the examined document, but in another form such as a synonym, a changed tense, a wrongly spelled word or a word that is similar to it. For example, *In some cases* becomes *In some circumstances*.⁴⁷⁵

⁴⁷⁵ Translation from the URKUND Administrator Guide.

6. Conclusion

The study of the various cases of plagiarism that we have been entrusted with shows that similarity software is unable to identify sophisticated plagiarism or plagiarism relating to certain representations such as maps, tables, or photos. Furthermore, sources are not accessible in the following cases: when the author of the analysis chooses to remove a document from the 'Reference Library' (Compilatio); when the identified source is available online, but access to it is limited to those with access rights (e.g. password protection, because of subscription); of course, when the textual content of the source is not available online, such as books in hard copy; and when the source is no longer available at the time the analysis was carried out (e.g. Wikipedia articles, which are frequently updated). Under these conditions, software companies, aware of the absolute necessity to improve access to sources, negotiate partnerships with scientific journals and encyclopedias to expand their databases, with varying degrees of success.

Nevertheless, software is a tool that gives us access to indicators of the *modus operandi* used. On the basis of these indicators, and apart from the case of verbatim plagiarism, an analysis is essential because, on the one hand, the subterfuges used are increasingly sophisticated, and on the other hand, the software available on the Internet to make masking and translation easy is both accessible and easy to use. Thus, although similarity software is constantly being improved, at this stage of its development, it should be considered above all as an essential tool for raising awareness and deterring plagiarism.

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ACADEMIC INTEGRITY AT THE UNIVERSITY OF MONTENEGRO: PATHWAY TO CERTIFICATION

Sanja Peković, Jovana Janinović and Dijana Vučković

Abstract

Academic dishonesty is one of the major challenges in higher education. In developed countries, higher education institutions have, for some years now, begun to put in place strategies and mechanisms to combat academic misconduct. In developing countries, such as Montenegro, the formalisation of processes to strengthen academic integrity is a relatively new concern. In this paper, we will analyse the framework for the development of a determined academic integrity strategy, which resulted in the international certification of the University of Montenegro. Based on the literature review on academic integrity and using the case analysis method, we highlight the steps in the certification process. We will show how the holistic approach that has been adopted strengthens the culture of academic integrity.*

* Corresponding authors: S. Peković, J. Janinović and D. Vučković. To quote this chapter: Peković, S., Janinović, J., Vučković, D., “Academic Integrity at the University of Montenegro: Pathway to Certification” in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.457-487, DOI: 10.58863/20.500.12424/4273123 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

1. Introduction: the Montenegrin context

Academic dishonesty has been recognized as a global problem in higher education that takes many different forms (e.g. cheating, plagiarism, falsifying/fabricating, aiding and abetting academic dishonesty, etc.).⁴⁷⁶ In a recent survey of 70,000 high school students in the United States, McCabe, Butterfield, and Treviño reported that 64% of students admitted to cheating on a test, 58% admitted to plagiarism, and 95% said they had participated in some form of cheating.⁴⁷⁷ What is more, a study by Jones revealed that 92% of students responding to a survey admitted they had cheated or knew someone who had cheated.⁴⁷⁸ Bernardi and others found that, even though students know that cheating is not acceptable, a majority of them cheated in the course of their education.⁴⁷⁹ These findings suggest that cheating is accepted as almost normative behavior among students.⁴⁸⁰

Consequently, *The Glossary for Academic Integrity* was developed, and several taxonomies were created with the aim of facilitating

⁴⁷⁶ A. Ahmadi, 'Plagiarism in the Academic Context: A Study of Iranian EFL Learners', *Research in Ethics*, 10 (2014), 151-68; S. Peković and others, 'What Drives Students' Intention to Plagiarise in Montenegro: The Moderating Role of text Matching Software', in *Integrity in Education for Future Happiness*, ed. by Z. R. Zhan, C. Hill, and C. Foltynnek (Brno: Mendel University Press in Brno, 2020), pp. 127-54.

⁴⁷⁷ D. L. McCabe, K. D. Butterfield, and L. K. Treviño, *Cheating in College: Why Students Do It and What Educators Can Do about It* (Baltimore: Johns Hopkins University Press, 2012).

⁴⁷⁸ D. L. R. Jones, 'Academic Dishonesty: Are More Students Cheating?', *Business Communication Quarterly*, 74(2) (2011), 141-50.

⁴⁷⁹ R. A. Bernardi and others, 'Examining the Decision Process of Students' Cheating Behavior: An Empirical Study', *Journal of Business Ethics*, 50 (2004), 397-414.

⁴⁸⁰ D. Vučković and others, 'Attitudes Towards Cheating Behavior During Assessing Students' Performance: Student and Teacher Perspectives', *International Journal for Educational Integrity*, 16 (2020), Article 13.

systematization in the field.⁴⁸¹ In addition, different strategies have been adopted at the international, national, institutional, and individual levels to combat academic dishonesty and enhance a culture of integrity.⁴⁸² Institutions have developed a wide range of mechanisms to install, promote, and spread academic responsibility among members of the academic community. They are now trying to adopt policies and activities that support student learning by educating both staff and students about responsible behavior in the learning environment.⁴⁸³ The effectiveness and impact of policies such as honor codes, online tutorials, academic integrity laws, and punishments have been extensively analyzed by scholars around the world.⁴⁸⁴

The majority of previous analyses on the issue have focused on developed countries, even though less developed countries are not

⁴⁸¹ L. Tauginienė and others, *Glossary for Academic Integrity* (Brno: European Network for Academic Integrity (ENAI), 2018); L. Tauginienė and others, 'Enhancing the Taxonomies Relating to Academic Integrity and Misconduct', *Journal of Academic Ethics*, 17 (2019), 345-61.

⁴⁸² J. Orr, Jr., 'Developing a Campus Academic Integrity Education Seminar', *Journal of Academic Ethics*, 16(3) (2018), 195-209; P. Mahabeer, and T. Pirtheepal, 'Assessment, Plagiarism and Its Effect on Academic Integrity: Experiences of Academics at a University in South Africa', *South African Journal of Science*, 115(11-12) (2019), 1-8.

⁴⁸³ T. Bretag and S. Mahmud, 'A Conceptual Framework for Implementing Exemplary Academic Integrity Policy in Australian Higher Education', in *Handbook of Academic Integrity*, ed. by T. Bretag (Singapore: Springer, 2016), pp. 463-80.

⁴⁸⁴ D. L. McCabe, L. K. Treviño, and K. D. Butterfield, 'Honor Codes and Other Contextual Influences on Academic Integrity: A Replication and Extension of Modified Honor Code Settings', *Research in Higher Education*, 43 (2002), 357-78; T. B. Gallant and P. Drinan, 'Toward a Model of Academic Integrity Institutionalization: Informing Practice in Postsecondary Education', *The Canadian Journal of Higher Education*, 38(2) (2008), 25-43; R. W. Belter and A. du Pré, 'A Strategy to Reduce Plagiarism in an Undergraduate Course', *Teaching of Psychology*, 36 (2009), 257-61.

exempt from this problem.⁴⁸⁵ Accordingly, a survey by Ives and others of more than 1,000 students at six universities in Romania showed that more than 90% of the students reported having engaged in some type of academic dishonesty.⁴⁸⁶ Moreover, media throughout the less developed countries repeatedly report scandals related to the violation of academic integrity at universities in these areas. Most of these scandals have related to students and researchers, but high-profile personalities have also been implicated. Although this problem is alarming and tarnishes the reputation and development of higher education institutions (HEIs) in less developed countries, research dealing with academic dishonesty in these countries remains quite scarce.⁴⁸⁷ Therefore, Ana and others urged that the issue of academic integrity should be examined in the context of less developed countries as well.⁴⁸⁸

The following pages present a case study concerning our experience at the University of Montenegro. The academic integrity certification process has enabled the university to implement a holistic approach in order to fight against academic dishonesty. The first author of this chapter was the leader of this initiative, while the third author was part of the group in charge of the certification process. They engaged in real participant observation throughout the process.⁴⁸⁹ It is therefore with the double role of researchers and group members that we will describe the

⁴⁸⁵ A. M. Carnero and others, 'Plagiarism, Cheating and Research Integrity: Case Studies from a Masters Program in Peru', *Science and Engineering Ethics*, 23(4) (2017), 1183-97; B. Ives and others, 'Patterns and Predictors of Academic Dishonesty in Romanian University Students', *Higher Education*, 74(5) (2017), 815-31.

⁴⁸⁶ Ives and others, 'Patterns and Predictors'.

⁴⁸⁷ Peković and others, 'What Drives Students' Intention to Plagiarise'; Vučković and others, 'Attitudes Towards Cheating'.

⁴⁸⁸ J. Ana and others, 'Research Misconduct in Low- and Middle-Income Countries', *PLoS Medicine*, 10 (2013), Article e1001315.

⁴⁸⁹ *Encyclopedia of Case Study Research: Vol. I and II*, ed. by A. Mills, G. Durepos, and E. Wiebe (Thousand Oaks, CA: Sage, 2010).

steps that the University of Montenegro took to obtain its certificate relating to academic integrity.

2. The preliminary phase of the integrity strategy

Since ethics is given the highest priority in education and research in the European Union (EU), Montenegro, which is a candidate country to join the EU, started making significant efforts to strengthen academic integrity in recent years. The first steps in understanding the needs of Montenegrin HEIs in the field of academic integrity were taken by The Council of Europe's ETINED platform, which conducted extensive regional research. ETINED reached several important conclusions about Montenegrin HEIs, such as that they are still evidently dominated by traditional teaching and less oriented toward the learning process and that the learning environment is strongly marked by extrinsic motivation (points, grades, etc.). In addition, there are many employment-related problems, which is another very strong demotivating factor; cheating starts even before students enter university.⁴⁹⁰ Furthermore, the ETINED report indicated that there is a lack of clear guidelines and procedures on how to preserve and enhance academic honesty within the academic community as a whole. Thus, the lack of proper integrity policies, strategies, and mechanisms and the general confusion when it comes to what actually represents a violation of academic integrity have been identified as major impediments to strengthening the culture of academic honesty. According to the report, more research, training, transparency, and prevention efforts are needed to successfully combat academic misbehavior. Figure 1 illustrates the values for each variable in the Academic Integrity Maturity Model in the context of Montenegro.

⁴⁹⁰ Council of Europe Platform on Ethics, Transparency and Integrity in Education (ETINED), *South-East European Project on Policies for Academic Integrity—Vol. 5* (Strasbourg: Council of Europe, 2018).

Figure 1. *Academic Integrity Maturity Model radar chart for Montenegro.* Source: ETINED.⁴⁹¹

Based on the ETINED report, Montenegro undertook several important initiatives, such as the adoption of the Law on Academic Integrity (adopted in March 2019), which aims to precisely define forms of academic misconduct and penalties for violating the principles of



academic integrity. In collaboration with international partners such as the Council of Europe, the government appointed the National Ethics Board and acquired plagiarism detection software in order to strengthen HEIs' capacity to combat academic dishonesty. Consequently, the University of Montenegro (UoM), as the sole public university in the country, also undertook significant actions to support the government's efforts to enhance overall academic culture, deliver policy recommendations, educate and train students and researchers about anti-plagiarism, and increase institutional capacities to combat plagiarism and other forms of academic dishonesty. Acknowledging the importance of academic integrity as one of the pillars of institutional development, UoM organized various seminars, workshops, and round tables to strengthen the understanding of ethical standards and behaviors in higher education, analyze existing strategies, and adopt new ones to

⁴⁹¹ ETINED, *South-East European Project*, p. 75.

reduce plagiarism and academic dishonesty. This phase contributed to an understanding of the obstacles and the key players' reluctance.

University of Montenegro

The University of Montenegro, the only public higher education institution in Montenegro, was founded in 1974. It consists of nineteen faculties and three research institutes. It is an integrated HEI with approximately 20,000 enrolled students and 1,129 academic, professional, and non-academic staff members. Teaching at UoM is organized in accordance with the principles of the Bologna Declaration.

Montenegro signed the Bologna Declaration in 2003, and the new principles have been implemented at the University of Montenegro since 2007—the year when first programs were accredited. The Bologna reform was a major challenge in the development of UoM, as it was necessary to develop and adopt completely new legislative framework that was in accordance with the emphasized principles. The whole process of introducing the new model was marked by significant controversies—the public was not fully satisfied with this reform, and dissatisfaction with higher education was mainly attributed to the Bologna Declaration or to its unskilled implementation.⁴⁹² However, when Bologna Declaration was adopted, new documentation was created for the introduction of three study cycles (bachelor's, master's, and doctoral), new rules for each cycle were developed and adopted, curriculum forms were designed, etc. To date, UoM's academic and administrative staff have made many efforts and all three study cycles have been significantly improved. Since the 2016 academic year, all curricula at UoM are learning-outcome-oriented.

⁴⁹² Đ. Perović and D. Vučković, 'Success in Studying at the University of Montenegro: Is There Hyper-Production of Diplomas?', *Interdisciplinary Description of Complex Systems*, 17 (2019), 385-402.

Since the 2017–2018 academic year, all the programs have been organized according to the 3+2+3 model (three years of bachelor's studies + two years of master's studies + three years of doctoral studies, except in the regulated professions). Study programs are harmonized with those at relevant European universities; along with a significant number of cooperation agreements and exchange programs, this encourages and enables mobility within Europe for students, faculty, and staff.

The preparatory analyses, evaluations, and consultations highlighted the need to adopt a more comprehensive, holistic approach to combating academic dishonesty, based on the prevention of unethical behaviors at the institutional level.⁴⁹³ As suggested by McCabe, Butterfield, and Treviño, both formal systems (e.g. administrative leadership, values, policies, etc.) and informal processes (e.g. presence of role models, norms, rituals, myths, language, etc.) must be combined in order to influence students' academic values and behaviors and improve the general culture of academic integrity.⁴⁹⁴ Several scholars have shown that relying on particular practices related to academic integrity will not yield significant improvements.⁴⁹⁵ A holistic approach that is developed

⁴⁹³ W. L. Kibler and others, *Academic Integrity and Student Development: Legal Issues and Policy Perspectives* (Asheville, NC: College Administration Publications, 1988).

⁴⁹⁴ McCabe, Butterfield, and Treviño, *Cheating in College*.

⁴⁹⁵ T. B. Gallant, *Academic Integrity in the Twenty-First Century: A Teaching and Learning Imperative* (San Francisco: Jossey-Bass, 2008); W. Sutherland-Smith, 'Retribution, Deterrence and Reform: The Dilemmas of Plagiarism Management in Universities', *Journal of Higher Education Policy and Management*, 32(1) (2010), 5-16; J. M. Lang, *Cheating Lessons: Learning from Academic Dishonesty* (Cambridge, MA: Harvard University Press, 2013); E. J. Morris and J. Carroll, 'Developing a Sustainable Holistic Institutional Approach: Dealing with Realities "on the Ground" When Implementing an Academic Integrity Policy', in *Handbook of Academic Integrity*, ed. by T. Bretag

with regard to the institutional context has been identified as most effective way of boosting academic integrity.

Accordingly, in 2018, UoM decided to start the process of certification in the field of academic integrity in order to incorporate into its core strategy a culture of academic integrity that would shape students' commitments to moral behavior and opinions regarding academic (mis)conduct.⁴⁹⁶ The university wanted to acquire a certificate that would demonstrate its commitment to academic integrity, which according to Basso, is crucial to achieve a sustainable ethical environment with less academic misconduct.⁴⁹⁷ This chapter presents a case study of UoM's experience in the academic integrity certification process, which enabled the university to establish a more holistic approach to combating academic dishonesty. In other words, we describe the steps that UoM undertook to obtain the certificate related to academic integrity. In addition, we discuss ongoing and existing activities stemming from the certification process in the field of academic integrity.

3. A holistic approach toward academic integrity

3.1 The initiation of the certification process

In March 2018, representatives of the University of Montenegro visited the international Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA). IRAFPA has become a leading

(Singapore: Springer, 2016), pp. 449-62; R. L. Young, G. N. S. Miller, and C. L. Barnhardt, 'From Policies to Principles: The Effects of Campus Climate on Academic Integrity, a Mixed Methods Study', *Journal of Academic Ethics*, 16(1) (2018), 1-17.

⁴⁹⁶ Young, Miller, and Barnhardt, 'From Policies to Principles'.

⁴⁹⁷ S. K. Basso, 'Experiences with and perceptions of academic dishonesty at Lehigh University: a plan to improve a campus culture that values integrity' (2014).

institution in the area of the academic integrity. In addition to research activities, IRAFPA provides various types of training and institutional support related to academic integrity. It also helps individuals and institutions affected by academic fraud or plagiarism and creates policies and methodological protocols with respect to fraud and plagiarism. Note that the study visit, as well as the whole certification process, was organized as part of the Council of Europe's *Strengthen Integrity and Combat Corruption in Higher Education* project, which has been implemented in Montenegro within the framework of the *Horizontal Facility for the Western Balkans and Turkey*, jointly funded by the European Union and the Council of Europe (CoE) and implemented by the CoE. The productive discussions during the visit resulted in UoM's initiative to create an academic environment, with the support of IRAFPA, that sustains all principles of academic integrity, which would be further confirmed by acquiring certification in the field of academic integrity. In fact, the idea was that certification would clearly demonstrate a comprehensive institutional commitment to promoting academic integrity and involve all the community members in the development and maintenance of the integrity principles.⁴⁹⁸ Apart from assuring a holistic approach that encompasses various activities, the benefit of certification is also related to the fact that it leads to increased competitiveness and external visibility.⁴⁹⁹ As Peković argues, certification is an important tool for signaling the institution's general capability and increasing its legitimacy.⁵⁰⁰

⁴⁹⁸ B. Whitley and P. Keith-Spiegel, 'Academic Integrity as an Institutional Issue', *Ethics and Behavior*, 11(3) (2001), 325-42.

⁴⁹⁹ M. J. Manatos, C. S. Sarrico, and M. J. Rosa, 'The European Standards and Guidelines for Internal Quality Assurance: An Integrative Approach to Quality Management in Higher Education?', *The TQM Journal*, 29(2) (2017), 342-56.

⁵⁰⁰ S. Peković, 'The Determinants of ISO 9000 Certification: A Comparison of the Manufacturing and Service Sectors', *Journal of Economic Issues*, 44(4) (2010), 895-914.

UoM started the certification process in academic integrity in July 2018. The first stage of the process was organized through a series of seminars held at the university. The objective was to familiarize the wider academic community and the university's management with the importance of academic integrity. The second stage involved the establishment of the working group that was in charge of coordinating all the necessary activities and tasks during the process in accordance with IRAFPA's requirements. The working group had to complete the *Academic Integrity Charter* defined by IRAFPA with the involvement of all the relevant stakeholders. In addition, the working group held several meetings with external consultants to ensure that the process was feasible and ran smoothly. More specifically, the IRAFPA experts closely monitored the university's progress, suggesting aspects that should be improved in order to obtain certification.

IRAFPA has developed guiding principles, the Academic Integrity Charter, that candidate institutions for certification should follow. The following sections explain the ten steps of the certification methodology.⁵⁰¹ Figure 2 illustrates the methodology. For each step, we provide theoretical background in order to benchmark UoM's activities against established principles and mechanisms recognized in the literature. Thus, before presenting each step in the certification process in the context of UoM, we draw on the previous literature to understand how theory and practice come together in creating an environment of academic integrity.

⁵⁰¹ For more information, see:

<https://irafpa.org/en/methods/guidelines/responsible-institution/>

Figure 2. The certification methodology.



3.2 Commitment of governing bodies

The commitment of organizational leaders is critical for promoting a culture based on academic integrity.⁵⁰² Moreover, Eury and Treviño suggested that multiple stakeholder involvement is the key factor in the

⁵⁰² J. Weber, 'Implementing an Organizational Ethics Program in an Academic Environment: The Challenges and Opportunities for the Duquesne University Schools of Business', *Journal of Business Ethics*, 65 (2006), 23-42; J. L. Eury and L. K. Treviño, 'Building a Culture of Honor and Integrity in a Business School', *Journal of Management Education*, 43(5) (2019), 484-508.

implementation of practices related to academic integrity.⁵⁰³ Cole and Kiss found that the most appropriate model for combating academic dishonesty is one that involves all three major constituencies: students, faculty, and administrators.⁵⁰⁴ Therefore, members of the academic community should share responsibility for creating a learning environment that supports academic integrity.

At UoM, as the report *Academic Integrity at the University of Montenegro: Policy and Practice* shows, the rector supported the whole process.⁵⁰⁵ It was the rector's decision to adopt the integrity plan. Then an integrity manager was appointed, whose main task was to coordinate implementation and improvement of the integrity plan. Each faculty appointed an academic integrity officer whose main task was to spread the culture of integrity within the unit and monitor the implementation of good practices, such as the use of anti-plagiarism software, guidance of students in terms of academic writing, etc. Similarly, the university administration showed great dedication to establishing and formalizing the culture of integrity. Finally, students were repeatedly reminded of their moral obligations and of punishments for violating academic integrity.

3.3 Human and financial organization

To combat academic misconduct, institutions need to allocate the necessary resources, both human and financial.⁵⁰⁶ Regarding human resources, the appointment of an academic integrity officer at the

⁵⁰³ Eury and Treviño, 'Building a Culture of Honor'.

⁵⁰⁴ S. Cole and E. Kiss, 'What Can We Do About Student Cheating?', *About Campus: Enriching the Student Learning Experience*, 5(2) (2000), 5-12.

⁵⁰⁵ S. Peković and others, *Academic Integrity at the University of Montenegro: Policy and Practice* (Podgorica: University of Montenegro, 2019).

⁵⁰⁶ E. Denisova-Schmidt, M. Huber, and E. Leontyeva, 'On the Development of Students' Attitudes Towards Corruption and Cheating in Russian Universities', *European Journal of Higher Education*, 6(2) (2016), 128-43.

university or faculty level is considered to have a positive impact on academic integrity.⁵⁰⁷ Moreover, the availability of financial resources determines the choice of academic integrity strategy.⁵⁰⁸

At UoM, human and financial organization was strategically planned and implemented. In addition to the integrity manager at the university level and the academic integrity officers at the faculty level, several other bodies were also in charge of promoting and maintaining academic integrity principles. The ethics committee (at the time of the certification process, it was called the Court of Honor) was the main body dealing with cases of unethical behavior. In addition, the board for quality assurance and a board for monitoring master's studies were also actively involved in various activities related to the promotion of academic honesty. The doctoral school and the editorial board also undertook important activities to prevent and detect plagiarism. The members of all boards received monthly compensation, which was budgeted, and funds allocated by the university. Thus, significant human and financial resources were engaged in raising awareness of the problem of academic dishonesty and its successful resolution.

3.4 Working group for academic integrity

Gallant and Drinan stressed that the creation of committees or working groups for academic integrity is an important tool for the adoption of best practices to promote academic integrity.⁵⁰⁹ Such working groups provide not only the necessary ethical infrastructure but also shared responsibility as they include all relevant members of the

⁵⁰⁷ Morris and Carroll, 'Developing a Sustainable'.

⁵⁰⁸ E. J. Holmes, 'Development and Leadership of a Faculty-led Academic Integrity Education Program at an Ontario College', *The Organizational Improvement Plan at Western University*, 22 (2017).

⁵⁰⁹ T. B. Gallant and P. Drinan, 'Organizational Theory and Student Cheating: Explanations, Responses and Strategies', *The Journal of Higher Education*, 77 (2006), 839-60.

academic community.⁵¹⁰ In addition, Kibler and others acknowledged the importance of an academic integrity officer who is responsible for monitoring relevant data, evaluating the effectiveness of policies and procedures, managing communication activities, and organizing training programs on academic integrity.⁵¹¹

At the beginning of the certification process, UoM appointed a working group that was in charge of monitoring all the activities and executing major tasks, such as the delivery of the Academic Integrity Charter. The working group created several policy documents and reports, such as *Academic Integrity at the University of Montenegro: Policy and Practice* and closely collaborated with the experts from IRAFPA and the CoE in designing a comprehensive plan to disseminate the culture of integrity at UoM. As key actors in the integrity building process, the members of the working group coordinated activities related to the promotion of academic integrity, collected information, and ensured the transparency and involvement of the entire academic community in the process.

3.5 Institutional policy

It is widely acknowledged that one of the most effective tools for combating academic dishonesty is an honor code.⁵¹² The rationale for this measure is that an honor code clearly defines what is expected of

⁵¹⁰ J. M. Stephens, 'Creating Cultures of Integrity: A Multi-Level Intervention Model for Promoting Academic Honesty', in *Handbook of Academic Integrity*, ed. by T. Bretag (Singapore: Springer, 2016), pp. 1-10.

⁵¹¹ Kibler and others, *Academic Integrity and Student Development*.

⁵¹² D. L. McCabe and L. K. Treviño, 'Cheating among Business Students: A Challenge for Business Leaders and Educators', *Journal of Management Education*, 19(2) (1995), 205-18; D. L. McCabe, L. K. Treviño, and K. D. Butterfield, 'Academic Integrity in Honor Code and Non-Honor Code Environments: A Qualitative Investigation', *The Journal of Higher Education*, 70(2) (1999), 211-34; L. Kidwell, 'Student Honor Codes as a Tool for Teaching Professional Ethics', *Journal of Business Ethics*, 29 (2001), 45-49.

students.⁵¹³ For instance, McCabe and Treviño compared two universities, one with and the other without an honor code, and concluded that significant differences existed between them regarding the rate of cheating.⁵¹⁴ In fact, they found that, while 54% of students had cheated at the university with an honor code, the percentage was considerably higher at the university without an honor code (71% of students).

Two main institutional policy documents that deal with academic integrity issues at UoM are the statute and the code of ethics. The code of ethics, adopted by the university senate, sets out the main values, professional standards, and ethical requirements at the university level. Responsibilities of academic and other staff and students are imposed by the ethics board, which also defines punishment for the violation of the ethical standards stipulated in the code of ethics. Additionally, the rules at all levels were adapted to precisely define what was expected of students in relation to academic behavior.

3.6 Internal and external communication

Effective communication plays an essential role in reducing the incidence of academic cheating.⁵¹⁵ Therefore, creating a clear, concise communication strategy has positive effects in reducing academic misconduct.⁵¹⁶ An effective system for communicating about integrity will generate more important information for the further improvement of

⁵¹³ D. L. McCabe and L. K. Treviño, 'Academic Dishonesty: Honor Codes and Other Contextual Influences', *The Journal of Higher Education*, 64(5) (1993), 522-38.

⁵¹⁴ McCabe and Treviño, 'Cheating among Business Students'.

⁵¹⁵ P. McGee, 'Supporting Academic Honesty in Online Courses', *The Journal of Educators Online*, 10(1) (2013), 1-31.

⁵¹⁶ P. Boehm, 'Promoting Academic Integrity in Institutions of Higher Education' (unpublished doctoral dissertation, Texas A&M University-Commerce, 2008).

academic conduct.⁵¹⁷ Aaron emphasized that a more extensive communication strategy will improve awareness of academic integrity issues in the larger community, which is crucial for improving academic honesty.⁵¹⁸

Recognizing the importance of effective internal and external communication in spreading the culture of transparency, accountability, and transparency, UoM made significant efforts to ensure consistent, timely, and reliable transfers of information between all the stakeholders involved in the process. Continuously informing its members and the public of all the activities undertaken in order to strengthen the culture of integrity, the university publicly committed itself to successful implementation of the certification process.

3.7 Control

An effective system of control is an important mechanism for preventing malpractice.⁵¹⁹ Kennedy and others also argue that establishing control systems sends a message to students that all misconduct will be discovered and punished.⁵²⁰ In the context of specific forms of academic dishonesty such as plagiarism, researchers consider that text-matching software such as *Turnitin* constitutes one of

⁵¹⁷ N. Granitz and D. Loewy, 'Applying Ethical Theories: Interpreting and Responding to Student Plagiarism', *Journal of Business Ethics*, 72(3) (2007), 293-306.

⁵¹⁸ R. M. Aaron, 'Student Academic Dishonesty. Are Collegiate Institutions Addressing the Issue?', *NASPA Journal*, 29 (1992), 107-13.

⁵¹⁹ C. A. Malgwi and C. C. Rakovski, 'Combating Academic Fraud: Are Students Reticent about Uncovering the Covert?', *Journal of Academic Ethics*, 7 (2009), 207-21.

⁵²⁰ P. Kennedy and others, 'Modeling Academic Dishonesty: The Role of Student Perceptions and Misconduct Type', *Journal of Economic Education*, 39(1) (2008), 4-21.

the most effective tools for controlling and combating plagiarism.⁵²¹ As discussed by Peković and others, text-matching software has two important roles in reducing the incidence of plagiarism.⁵²² The first is related to the learning process, while the second is associated with the fact that, when students are aware that their work will be checked by plagiarism detection software, they will make additional efforts to avoid plagiarism.

In April 2018, UoM obtained the text-matching software *iThenticate* through the Ministry of Education, in the framework of the project to support the development of higher education and research potential entitled *Enhancement of HE Research Potential Contributing to Further Growth of the WB Region*. Consequently, UoM adopted a standard regarding the decision to use *iThenticate* that indicates the bodies responsible for evaluation, the verification procedure, etc. In addition, all faculty units were taught how to acquire additional text-matching software in order to further boost the control process and prevent plagiarism.

3.8 Training of faculty and students

Educating both faculty members and students about academic integrity is essential for building an academic culture that is based on integrity.⁵²³ That is also one of the main conclusions derived from recent

⁵²¹ Z. Ercegovac and J. V. Richardson, 'Academic Dishonesty, Plagiarism Included, in the Digital Age: A Literature Review', *College and Research Libraries*, 65 (2004), 301-18; E. G. Bradley, 'Using Computer Simulations and Games to Prevent Student Plagiarism', *Journal of Education and Technology Systems*, 44(2) (2015), 240-52; G. J. Curtis and L. Vardanega, 'Is Plagiarism Changing over Time? A 10-Year Time-Lag Study with Three Points of Measurement', *Higher Education Research and Development*, 35(6) (2016), 1167-79; Peković and others, 'What Drives Students' Intention to Plagiarise'.

⁵²² Peković and others, 'What Drives Students' Intention to Plagiarise'.

⁵²³ K. O. Clifford, 'Academic Integrity and Campus Climate at Small Colleges', in *Academic Integrity Matters*, ed. by D. D. Burnett, L. Rudolph, and K.O.

wide-ranging research conducted in Montenegro.⁵²⁴ Training sessions, workshops, and seminars for academic staff that focus on academic integrity are identified as a mechanism that stimulates awareness and initiatives regarding academic integrity among faculty members and empowers them to transfer the knowledge to students.⁵²⁵ In the same vein, educating students through various activities about the university focus on academic integrity is essential to foster a culture of academic integrity.⁵²⁶

Considering that teaching students and staff the principles of academic integrity represents an important prerequisite for further improvement, UoM organized a number of workshops, seminars, and round tables for different stakeholders within the academic community. For instance, a two-day seminar entitled *Strengthening Integrity and Combating Corruption in Higher Education* was organized for academic integrity officers and representatives of the student parliament. Moreover, the center for quality assurance prepared presentations for students at all levels to give them a better understanding of academic integrity and improve their academic fundamentals in order to prevent plagiarism.

3.9 Commission for appeals and mediation

One of the mechanisms for boosting academic and ethical integrity is appointing an ethics committee.⁵²⁷ A committee that is in charge of handling complaints and defining disciplinary measures helps to reduce

Clifford (Washington DC: National Association of Student Personnel Administrators, 1998), pp. 109-33.

⁵²⁴ Vučković and others, 'Attitudes Towards Cheating'.

⁵²⁵ Boehm, 'Promoting Academic Integrity'.

⁵²⁶ Kibler and others, *Academic Integrity and Student Development*.

⁵²⁷ M. Kaiser, 'Practical Ethics in Search of a Toolbox: Discourse Ethics and Ethical Committees', *Global Bioethics*, 17(1) (2004), 137-48.

the probability of academic misconduct.⁵²⁸ The existence of an authority that determines sanctions for violations of academic integrity, examines cases of misconduct, and defines punishments is a strong signal that the academic fraud is considered unacceptable and may have important consequences, which in turn should deter students and staff from cheating.⁵²⁹

UoM established a precise structure and guidelines for processing integrity violations. Appeals concerning violations of the code of ethics are submitted to the ethics board, which constitutes the commission in charge of addressing a particular case. In cases of suspected plagiarism that may emerge during the obligatory verification of Master's and PhD theses, the center for quality assurance and the doctoral school organize meetings with the author and their mentor in order to examine the issue and suggest a solution.

3.10 Development of a list of sanctions

Cole and Kiss argued that it is essential to inform everyone about academic integrity problems.⁵³⁰ They cited the example of the University of California, Davis which, among other things, regularly publicizes descriptions of disciplinary cases that have been resolved. In the same vein, Kibler and others suggested that cases of sanctions and punishments should be presented in university publications in order to maximize the preventive effect of the resulting punishments.⁵³¹

The code of ethics at UoM defines sanctions for different types of violations and different members of the academic community (students, faculty). They are announced in the university newsletter and publicized on the university website. As indicated in the report, the ethics board

⁵²⁸ Boehm, 'Promoting Academic Integrity'.

⁵²⁹ Kaiser, 'Practical Ethics in Search of a Toolbox'; Gallant and Drinan, 'Organizational Theory'.

⁵³⁰ Cole and Kiss, 'What Can We Do'.

⁵³¹ Kibler and others, *Academic Integrity and Student Development*.

produces annual reports that may be submitted to the rector or senate. Furthermore, disciplinary measures for most potential breaches by students of university rules and regulations are also defined in the statute.

3.11 Internal evaluation system

An evaluation system to track progress is recognized as an important mechanism for sustaining the culture of academic integrity.⁵³² As Caldwell and Hansen point out, continuous evaluation of outcomes can generate an academic environment that sustains a culture of academic integrity.⁵³³

UoM precisely defined future activities in the area of the academic integrity. It indicated that the ethics board would adopt the modified code of ethics in accordance with the Law on Academic Integrity. The senate adopted the new code of ethics in September 2019. In addition, the report submitted by the working group on the certification process specified that UoM was planning to review the rules governing studies at the undergraduate, master's, and doctoral levels in order to further highlight the importance of academic integrity. Accordingly, new rules were adopted. As previously mentioned, UoM undertook to create an online tutorial for students to promote the culture of academic integrity. The course was designed with the support of the EU and CoE and launched in February 2020. Despite the situation due to the COVID-19 pandemic, UoM managed to organize several workshops on academic integrity throughout 2020.

⁵³² Weber, 'Implementing an Organizational Ethics Program'; S. F. Gambescia, 'BEST PRACTICES: A Best Practice Protocol for Handling Academic Honesty Issues with Adult Students', *The Journal of Continuing Higher Education*, 55(1) (2007), 47-55; C. Caldwell and M. Hansen, 'Trustworthiness, Governance, and Wealth Creation', *Journal of Business Ethics*, 97(2) (2010), 173-88.

⁵³³ Caldwell and Hansen, 'Trustworthiness'.

3.12 External evaluation system

The certification process was completed at the end of February 2019 when a team of independent experts visited the university to evaluate its level of preparedness for certification. During their visit, the experts had discussions with the working group, the rector and vice-rectors, representatives of the integrity and legal departments, instructors, deans, directors of institutes, and students at all levels.

The certificate was officially delivered to the university by IRAFPA experts at the fourth Forum of Rectors of Balkan Universities, which was organized by UoM, and then at the ceremony for the forty-fifth anniversary of the University of Montenegro.

4. Conclusion and discussion

The establishment of an institutional culture of integrity cannot be decreed; it takes several years. It would be naive to believe that the establishment of regulations, ethics committees, or software utilization change human behavior. Academic integrity certification is a multilayered process which requires significant institutional commitment, reorganization, control, and evaluation. And it is this commitment that makes it possible to ensure that integrity at the core of the university. The IRAFPA methodology adopted by the University of Montenegro can be described as a process that consists in several stages, which are distinct but complementary and which ensure the gradual adoption of the principles of integrity. Certification enabled the university to mobilize all the stakeholders involved in the process, and mobilization leads to buy-in to what they often found to be a vague concept: integrity. This concept of integrity motivated only a few players at the beginning but gradually took shape because the debate made it tangible.

Academic integrity is a very complex phenomenon that depends on many contextual factors. It is basically a question of ethics in higher

education, which is why HEIs from both developed and less developed countries face many challenges in this regard. Understanding academic integrity at any institution will initiate a comprehensive understanding of the whole society in which the HEI is deeply rooted. In the Montenegrin societal and cultural context, it is very important to mention that ethics is traditionally highly valued, but long-lasting, national and regional transitions since the 1990s have influenced many economic, social, and, therefore, educational transformations. Consequently, just a few years ago (in 2018) the leadership at the University of Montenegro started to engage with academic integrity more systematically, incorporating a holistic approach and an unconditional commitment to achieving high integrity standards.

This chapter has shown how structured, benevolent support from an external organization made it possible to proceed smoothly, in just two years, toward the lasting acceptance of a culture of integrity. This journey may be useful to other higher education institutions that also want to incorporate integrity principles and strive for certification, as it constitutes an academic ‘toolbox’ of principles, strategies, and steps in the certification process. In conclusion, while the challenges of the process of institutionalizing academic integrity principles and obtaining certification are usually common to most HEIs, the mechanisms, tools, and strategies for achieving these goals always depend on the local context. Thus, the UoM’s pathway toward certification clearly differs from the similar processes that took place or will take place in other countries and HEIs. But the goal is always the same: to establish a socially responsible university.

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RETHINKING RESEARCH INTEGRITY –A DIALOGICAL AND REFLECTIVE APPROACH

Susana Magalhães

Abstract

In this chapter, we reflect on responsible conduct in research and the need to complement a top-down normative approach with a bottom-up dialogical approach, giving the example of the training sessions organised since October 2019 at the Institute for Research and Innovation in Health Sciences - i3S based in Porto, Portugal. Research integrity has been the main concern of universities and other research institutions due to the increasing number of cases of research misconduct every year. Although scientific governance documents aim to promote the integrity and accountability of researchers, rather than focusing exclusively on cases of misconduct, they tend to be interpreted as warnings to avoid fabrication, falsification and plagiarism, emphasising the need for sanctions. However, the meaning of integrity for researchers is not homogeneous and can be determined by context. We argue that the integrity of researchers should be promoted in a positive bottom-up approach, without neglecting open, transparent and clear standards and guidelines for responsible conduct.*

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1. Responsible conduct and research institutions

Research integrity is now a key issue of concern for universities and other research institutions due to the growing number of cases of research misconduct every year.⁵³⁴ Since the 1980s, research misconduct has led to the institutionalization of bodies with a specific focus on dealing with research integrity issues, such as the Office of Research Integrity in the US and the UK Research Integrity Office. However, the annual number of articles on research integrity indexed in the Web of Science™ between 1982 and 2019 has risen from none to over 200.⁵³⁵ Science is no longer a one-person business, with isolated researchers working in their own laboratories, and the number of researchers has risen sharply, while the pressure to publish continues to grow. In an academic world that is now largely open to society, the number of stakeholders is constantly increasing. Guidelines and norms have been issued covering the different dimensions and principles of trustworthy, reliable, honest, and accountable research: the Singapore Statement (2010), the Montreal Statement (2013), the Hong Kong Principles

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⁵³⁴ L. K. Altman, 'For Science's Gatekeepers, a Credibility Gap', *The New York Times*, 2 May 2006; B. Deer, 'How the Case Against the MMR Vaccine Was Fixed', *BMJ*, 342 (2011), c5347; N. H. Steneck, 'Assessing the Integrity of Publicly Funded Research [Data Set]', in *Investigating Research Integrity: Proceedings of the First ORI Research Conference on Research Integrity*, ed. by N. Steneck and M. D. Scheetz (Rockville, MD: Office of Research Integrity, 2002), pp. 1-16; N. H. Steneck, 'Fostering Integrity in Research: Definitions, Current Knowledge, and Future Directions', *Science and Engineering Ethics*, 12(1) (2006), 53-74.

⁵³⁵ M. Szomszor and N. Quaderi, *Global Research Report—Research Integrity: Understanding Our Shared Responsibility for a Sustainable Scholarly Ecosystem* (London and Philadelphia: Institute for Scientific Information, Clarivate, 2020).

(2019), and the revised European Code of Conduct for Research Integrity (2017).

Hundreds of articles have been written on the threats to research quality, including the competitive environment, pressure to publish, poor mentoring and supervision, and a reward system based on metrics, all of which are likely to promote ethical disengagement strategies. But making a statement about what is wrong—about unethical conduct—is not enough to understand what to do to put integrity back at the heart of the system. In ‘Reasons Why Scientists Avoid Thinking about Ethics’, Wolpe points out that ethics is claimed to be arbitrary, an obstacle to progress, and an outsider in the research environment.⁵³⁶ Apart from these reasons overtly mentioned by researchers, we believe that there are cognitive distortions that support disengagement from compliance. Like Bandura and others, we think that moral disengagement may be focused on the cognitive restructuring of unethical conduct into benign or worthy behavior by moral justification or sanitizing language.⁵³⁷ To deepen this perspective, DuBois, Chibnall, and Gibbs conducted innovative research.⁵³⁸ They adapted the ‘How I think’ survey to create the ‘How I think about research’ questionnaire, developing a useful tool for understanding the factors that influence research integrity.⁵³⁹ It includes the cognitive distortions mentioned by Bandura: blaming others,

⁵³⁶ P. R. Wolpe, ‘Reasons Scientists Avoid Thinking about Ethics’, *Cell*, 125(6) (2006), 1023-25.

⁵³⁷ A. Bandura and others, ‘Multifaceted Impact of Self-Efficacy Beliefs on Academic Functioning’, *Child Development*, 67(3) (1996), 1206-22.

⁵³⁸ J. M. DuBois, J. T. Chibnall, and J. Gibbs, ‘Compliance Disengagement in Research: Development and Validation of a New Measure’, *Science and Engineering Ethics*, 22(4) (2016), 965-88.

⁵³⁹ J. C. Gibbs, A. Q. Barriga, and G. B. Potter, *How I Think (HIT) Questionnaire and Manual* (Champaign, IL: Research Press, 2001).

minimization/mislabeling, and egocentric thinking.⁵⁴⁰ The authors point out that this instrument can be used to make researchers aware that ‘ordinary’ researchers can violate the basic rules of science by self-justifying their behaviors. This kind of confrontation appears necessary to us because questionable research practices (QRPs) seem to be much more prevalent and damaging than they seem. Such practices are the tip of the iceberg and need to be seriously addressed, not only for their negative impact on the quality and reputation of science but also, and most of all, for what they stand for in researchers’ everyday life: demotivating realities that threaten mental health and compromise team and individual work.⁵⁴¹ Considering this alarming observation made at the level of the individual, the question for research is how to go from words to deeds when one is an institution.⁵⁴²

2. The three r’s: reflection, responsibility, and reciprocity

The Unit for Responsible Conduct in Research (URCR) of the Institute for Research and Innovation in Health Sciences—i3S has decided to put the principles of integrity into practice with the devices described in the following pages. The URCR’s work plan was designed by the author of this paper, as head of the unit, working closely with the Committee for Ethical and Responsible Conduct of Research and following the documents and policies regarding scientific integrity already implemented at i3S. The three main pillars of our work plan focus on three main areas; the pillars are the three R’s: *Reflection*,

⁵⁴⁰ A. Bandura, ‘Moral Disengagement in the Perpetration of Inhumanities’, *Personality and Social Psychology Review*, 3(3) (1999), 193-209.

⁵⁴¹ Shift Learning, *What Researchers Think About the Culture They Work In* (London: Wellcome Trust, 2020).

⁵⁴² N. Mejlgaard and others, ‘Research Integrity: Nine Ways to Move from Talk to Walk’, *Nature*, 586(7829) (2020), 358-60.

Responsibility, and *Reciprocity*, and the areas are Training, Clarifying Terms/Concepts/Procedures, and Open Dialogue.

Our Institute

The Unit for Responsible Conduct in Research of the Institute for Research and Innovation in Health Sciences—i3S addresses questions of integrity by focusing on solid training for researchers and students and developing clear policy documents to guide the institution.

This institute results from the long-term collaboration between the Institute for Molecular and Cell Biology (IBMC), Institute for Biomedical Engineering (INEB), and Institute of Molecular Pathology and Immunology of the University of Porto (IPATIMUP), and focuses on three integrative research programs: Cancer, Host Interaction and Response, and Neurobiology and Neurological Disorders. The transdisciplinary character of i3S is achieved by promoting projects addressing questions that require the participation of basic and applied sciences. It brings together over 1,400 workers and has a strong social mission, reflected in the training of young scientists, clinical services, and public engagement with science. i3S has therefore become the major Portuguese research institute in health sciences, gaining in critical mass and conducting multidisciplinary research that facilitates the development of integrated studies and solutions in the fields of biomedicine and health. In 2019, two units were set up to address cross-cutting issues related to scientific integrity and career development: the Unit for Responsible Conduct in Research (URCR) and the Unit for Career Development.

Reflection on research practices and on the meanings of terms and concepts related to responsible research can guide scientists as they encounter the complexity of their daily activities, potentially influencing their choice of how to act when they face ethically ambiguous situations. Based on the idea supported by Johansen and Christiansen that ‘in order

to teach students responsible lab practice, one should move from the level of actions (this action is right, and this is wrong) to the level of justification', we argue that the same applies to researchers in all stages of their career.⁵⁴³ Not only do researchers need to engage in ethical deliberations, but integrity offices and research governance bodies also need to rethink the meaning of integrity, misconduct, and QRP, since there is no agreement on what these terms stand for: 'because science is an innovative and ever-changing endeavor, the meaning of misbehavior is permanently shifting and frequently readdressed and renegotiated within the scientific community. Quantitative approaches alone are thus hardly able to accurately portray this dynamic phenomenon'.⁵⁴⁴

Responsibility is the prerequisite for freedom of research: choosing the research question, the methodology, the procedures for data collection and storage, and the means for disseminating data and results can only be free if researchers take responsibility for their choices and are accountable for them. Moreover, since research integrity is reflected in norms within a deontological approach, adherence to these norms requires: (1) understanding how guidelines apply to daily research practice, (2) acknowledging the broader context of all the stakeholders involved, and (3) recognizing one's own responsibility to promote a good research environment. The territory where one can move from intentions to consequences without forgetting who one wants to be is the area of deliberation, which is promoted in our training sessions, as explained below.

Reciprocity, the third pillar, is the result of the other two R's: if one steps back, sees oneself and one's team from the outside, and takes

⁵⁴³ M. W. Johansen, and F. V. Christiansen, 'Handling Anomalous Data in the Lab: Students' Perspectives on Deleting and Discarding', *Science and Engineering Ethics*, 26(2) (2020), 1107-28.

⁵⁴⁴ F. Hesselmann, V. Wienefoet, and M. Reinhart, 'Measuring Scientific Misconduct—Lessons from Criminology', *Publications*, 2(3) (2014), 61-70, p. 61.

responsibility for one's choices among alternative paths, reciprocal relationships within the research environment can actually happen, providing benefits for all the stakeholders. The main idea underlying this workplan is to fight *inattentional blindness* by shifting the common approach to or perspective on research issues.⁵⁴⁵ Too much focus on misconduct within a top-down normative framework does not actually address researchers' needs and queries and can create a false sense of compliance: if one merely follows the rules without believing in them and without understanding why they were formulated, one can easily break them.

Today, as research institutions have become more concerned about misconduct, public awareness of misconduct has increased, restoring a central role for national and international guidelines on responsible conduct in research. The focus is now on promoting integrity and accountability, rather than focusing exclusively on misconduct (fabrication, falsification, plagiarism, and ghost authorship). We believe that there is a strong need to use positive reinforcement, within a bottom-up approach, and to build on the good practices that are already in place.

3. Working out the meaning of research integrity at i3s

The meaning of the concept of 'integrity' for researchers, research institutions, and policymakers is not homogeneous. Its definition is clearly influenced by each person's individual experience, training, and work environment. Defining research misconduct seems easier. One can distinguish between very narrow definitions of misconduct, which limit it to falsification, fabrication, and plagiarism (FFP); broader definitions that include what are currently referred to as QRPs; and conceptually

⁵⁴⁵ C. Kreitz and others, 'Inattentional Blindness and Individual Differences in Cognitive Abilities' *PLoS ONE*, 10(8) (2015), Article e0134675.

open definitions that include unethical behaviors not strictly linked to research practices.⁵⁴⁶

Considering this difference of interpretation and assuming that no training in research integrity will be effective unless it is based on reflection and dialogue, the URCR at i3S has been promoting integrity among researchers following a bottom-up approach that includes:

- working closely with the researchers, answering their queries, and promoting their training in ethics and responsible conduct of research;
- being the contact point for those wishing to report cases of research misconduct, in confidence, before any formal allegation is made;
- issuing guidance procedures on how to make allegations of research misconduct;
- supporting the i3S community in the implementation of international codes of conduct and international best practices in research ethics and integrity;
- working in collaboration with other national and international institutions of excellence in the field of ethics and responsible conduct of research;
- promoting training actions on vital areas pertaining to bioethics and responsible conduct of research, as well as other scientific activities and the subsequent dissemination of results.

The three R's—Reflection, Responsibility, and Reciprocity—mentioned before are the main pillars of the training sessions that regularly take place at i3S. The aim is to give researchers the opportunity to reflect upon the various dimensions of research ethics and

⁵⁴⁶ S. P. J. M. Horbach and W. Halfman, 'Promoting Virtue or Punishing Fraud: Mapping Contrasts in the Language of "Scientific Integrity"', *Science and Engineering Ethics*, 23(6) (2017), 1461-85.

integrity, while also making them aware of the different international and institutional rules and guidelines that regulate the responsible conduct of research. The methodology that is used is dialogical and self-reflective, with instruments that elicit the researchers' perspectives and perceptions, without compromising their right to withhold their views. Each session is structured around theory presentation, individual participation (face-to-face or online sessions), discussion of case studies, dilemma games played in real time, and take-home messages. The target audience has been PhD holders and junior researchers, but the aim is to include researchers at all career stages. The URCR holds meetings with each research group in order to get feedback on various dimensions of responsible research: ethics, governance, open access, public engagement, and science education.

During the first two training sessions, researchers are asked to talk about the ethical aspects of the work they are doing, which signals that each of them is responsible for considering their roles in protecting the integrity of the team's work. So the first step is to make each researcher reflect on the nature of science and on the terms and concepts that are used within the field of scientific research.

The terms 'good research' and 'good researcher' refer to various concepts that range from a utilitarian approach to a moral view of goodness, and it is with these terms that the reflective path starts in the training sessions. The self-declaration approach, one of the tools used within the *training the trainers* Virt2UE program, has been adapted in a self-reflective document on what 'good research' and 'good researcher' mean, as well as on the main ethical issues and breaches of integrity that researchers have faced themselves or witnessed in others.⁵⁴⁷ At this point, the aim is not so much to explore the reasons why these unethical

⁵⁴⁷ CORDIS, Virtue Based Ethics and Integrity of Research: Train-the-Trainer Program for Upholding the Principles and Practices of the European Code of Conduct for Research Integrity, 21 September 2021.

or questionable behaviors happen, but mainly to give participants the opportunity to explore

- what kind of virtue there is in research;
- what an ethical issue is;
- what cognitive distortions we use when we disengage from compliance;
- and how aware we are of the ethical questions that come up in research and for the different stakeholders.

Based on the reflections of the participants in these training sessions, goodness in research is related both to character (moral approach) and to procedures and goals (procedural and utilitarian approach). One approach does not predominate over the other, which suggests that the rising number of questionable practices among scientists is not due to lack of awareness of the right thing to do.

Moving on from the nature of science to the nature of the research environment, and still focused on the researcher's own identity and existence within a community, the second step aims to promote reflection on the kind of conflicts that prevail among researchers and how to avoid or deal with them. Researchers usually highlight three issues as being frequent and harming themselves and the quality of the work environment: poor supervision, authorship-related conflicts, and internal conflicts related to reporting misconduct. Only after these first two steps are taken are the trainees invited to reflect on misconduct and questionable practices. As far as breaches of research integrity are concerned, the researchers participating in our training sessions have emphasized the need to reflect on unethical authorship, creative data normalization, plagiarism, and poor supervision, together with the relevance of promoting an assessment system for researchers that is not bibliometric and balancing the normative approach to integrity with a reflective, dialogical one. Only by reflecting upon the codes and guidelines for responsible research can scientists be reminded of these

norms. Moreover, it is through reflection and critical thinking that researchers can become more sensitive to ethical issues and be able to recognize them and bridge the gap between abstract principles and concrete dilemmas experienced in their daily lives.

The reasons for not reporting misconduct include ‘for example, the (non) seriousness of the deviation, nature of the relationship to the offender, power imbalances, and fear of severe consequences of reporting such as reputational or career damage’.⁵⁴⁸ In our group discussions on this issue, all of these reasons have been clearly or implicitly referred to by researchers, and power imbalances are mentioned most frequently. Clear institutional guidelines on the procedures to report misconduct are important but not sufficient. Open discussions of researchers’ perspectives on what constitute cases of misconduct and QRP are essential to promote moral sensitivity and build confidence in the system. At i3S, clear guidelines have been issued, together with clarification of terms, and they have been the focus of reflection not only in formal training sessions but also in informal conversations between the URCR and researchers.

The same kind of normative/dialogical approach is used to address authorship and supervision conflicts: authorship guidelines have been complemented with a document clarifying terms and concepts, which also aims to provide a framework for task planning and authorship credits and order. These documents should be discussed in training sessions and within each research group, so that they can be living documents and not merely rules and norms that may be detached from researchers’ everyday practice. Concerning the specific issue of poor supervision, the need to reflect and debate is particularly urgent, since many conflicts are kept silent for fear of retaliation, lack of awareness of

⁵⁴⁸ M. V. Buggenhout, J. Christiaens, and S. Gutwirth, *Final Report on the Incidence of Misconduct* (Promoting Integrity as an Integral Dimension of Excellence in Research) (Brussels: Vrije Universiteit Brussel—VUB, n.d.).

the ethical issue at stake, or misunderstandings based on individual expectations.

Given that these training sessions only started in 2019, it is still too early to assess their impact. However, the individual feedback has been positive, stressing the importance of being given the opportunity to reflect, discuss, and speak up on issues of research integrity that were not previously discussed. Infrastructural obstacles have been often pointed out, mainly funding pressure, poor career development expectations, and the lack of transparency concerning assessment and recruitment. We expect that the bottom-up approach will be complemented by a top-down restructuring of the research ecosystem, including all stakeholders: not only individual researchers but also funding institutions, universities, research institutions, and political decision-makers. Moreover, we have invited researchers working at integrity agencies and other research institutions based in other countries to share their experience and discuss integrity issues with the i3S community, because we believe that only by sharing can we actually improve training strategies and governance documents.

4. Final remarks

By creating a unit for the responsible conduct of research, i3S has made a courageous and unambiguous strategic choice: good research requires not only a solid scientific background but also thoughtful practice in ethics and integrity. Formalizing clear, open public standards and guidelines is essential for responsible research. Solid training in this area helps to create an interpersonal dialogue that focuses on the essential: integrity. Otherwise, researchers' attention remains focused on their publications, and we know that people sometimes fail to notice a salient, very visible point. This phenomenon is known as 'inattentional blindness'. Our ability to focus our attention allows us to ignore

irrelevant or distracting information, but it sometimes makes us miss things we should or would have liked to see.⁵⁴⁹

To sum up, within the field of ethics and integrity in everyday research, there are four main areas that need to be addressed and have been the focus of attention:

- reflecting on terms and concepts;
- defining clear norms and guidelines for research practice;
- preventing and, when it cannot be prevented, sanctioning misconduct;
- thinking with and not only about the codes for responsible research, mainly concerning questionable research practices.

The everyday life of researchers at all career stages is generally inspired by good intentions and practices, and ethical issues are experienced as complex and fully intertwined with their identity and not only with their role as scientists. Promoting integrity within a holistic approach requires all stakeholders to share responsibility for a sustainable research ecosystem. By using the term ‘ecosystem’, we are underscoring the interrelations among all the participants in the world of science, which have been all the more visible with the growing trend toward open science.

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**RETHINKING INTEGRITY TRAINING
IN TIMES OF CHANGE**

INTRODUCTION

*Jorge Onrubia Pintado**

Looking back over the centuries, it is difficult not to acknowledge that academic institutions have resisted the historical changes, the tensions between tradition and change, between conservatism and progress, that have defined the fate of the Western world since the advent of historical capitalism or modernity-coloniality.⁵⁵⁰ As is well known by now, the second half of the last century witnessed profound changes in the Western academic landscape, especially in European universities: democratization of access to higher education, opening it up to the masses, with the attendant explosion in the number of faculty and staff; redefinition of the university's mission, in particular a new balance between research and teaching and the increased tertiarization of vocational education and training in the name of employability; establishment of supranational interuniversity cooperation frameworks to promote the mobility of students and instructor-researchers; and proliferation of institutions with an entrepreneurial ethos in which

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⁵⁵⁰ I. M. Wallerstein, *Historical Capitalism* (London: Verso, 1983); W. Mignolo, *Local Histories/Global Designs: Coloniality, Subaltern Knowledges, and Border Thinking* (Princeton, NJ: Princeton University Press, 2012).

academic services are provided on an à la carte basis to student-customers.

The latest major change is undoubtedly the massive intrusion of information and communication technologies (ICTs) into the academic landscape. The first tentative steps toward distance learning have been joined over the years by a plethora of increasingly powerful digital resources and online platforms, which have led to an exponential growth in distance-learning courses, of which Massive Online Open Courses have established themselves as the model to emulate in the university market. The arrival in our classrooms of the first generations of digital natives, for whom free use of the Internet is the main, if not the only, socially recognized source of information and even ‘knowledge’, has only served to demonstrate the true extent of this phenomenon, with all its implications. Ultimately, the disruptive potential that the omnipresence of digital technology represents for our entire university system became clear during the COVID-19 pandemic, when institutions and their staff, who are generally poorly trained, under-resourced, and largely unmotivated to use ICT solutions for university teaching and learning, suddenly had to cope with the urgent needs for online teaching and assessment imposed by the lockdown.

The ramifications for academic integrity of this profoundly altered landscape are comparable only to the challenges it brings to the fore. Meeting these challenges will, in my view, hinge on two crucial observations. First, there is the socially constructed—and therefore profoundly and inevitably historical and cultural—nature of ethical and moral principles and of the entire semantic field of ‘virtues’ associated with them: honesty, integrity, deontology, responsibility, trust, etc. Second, as Pierre Bourdieu noted in *Homo academicus*, a brilliant and provocative sociological analysis of the French academic world in the 1980s, there is the fact that any crisis in the higher education system

brings with it a correlative crisis of ‘faith’, of trust in its ways of thinking and in its practices.⁵⁵¹

In the process of reflection and self-analysis that will bring about a renewal of the thinking and practices that we are required to adopt in these times of crisis, if we are to protect all that is worth saving in the current system, particularly by staving off the risk of polarization (expensive private universities for a select few, second-tier universities or online studies for the rest), we must undoubtedly include, among other necessary intellectual tasks, the urgent need to rethink academic integrity. Clearly, this process must not overlook the fact that training in academic integrity must be embedded at the very core of university education: learning to research and researching to learn.⁵⁵² Nor should it forget that the practice of academic integrity in the broadest sense is, on balance, only one aspect of the integrity, or ethics, of social practices. And that, in their axiological dimension, academic thinking and practice are dedicated to combating obscurantism and populism of all kinds and to fostering cultural freedom, intellectual cooperation, critical thinking, and creativity.

To speak solely of students’ integrity, which is the exclusive focus of this section, the process should start with a realistic and forthright diagnosis of the situation and a decision on the relative contributions to the fight for integrity of coercion, inculcation, and persuasion, and their respective methods and protocols. If we focus only on the last two aspects, is there a need for specific, targeted training that might be included in a ‘transdisciplinary tithe’, Edgar Morin’s proposed 10% of course time that could be levied on any university curriculum and used

⁵⁵¹ P. Bourdieu, *Homo academicus* (Paris: Éditions de Minuit, 1984).

⁵⁵² V. Bedin, ‘Éditorial’, *Les dossiers des sciences de l’éducation*, 34 (2015), 7-11. This editorial is the introduction to an issue dedicated to universities and research training.

for joint courses?⁵⁵³ Or is it better instead, in the wake of gender mainstreaming, to integrate it within each discipline in a cross-disciplinary and therefore rather ‘undisciplined’ training approach? What role should be played in this context by the mentoring work of teacher-researchers, especially at master’s and doctoral level, where their example and exemplary conduct are decisive in the acquisition of the principles that should underpin their students’ (good) practices? The authors of the five contributions presented below attempt to answer these and other questions.

Drawing on his experience in the field and his familiarity with theatrical techniques, Marian Popescu offers us a stimulating examination of what he terms academic ‘integrethics’ and the role that the ‘sages of integrity’ should play in its implementation. The author builds his concept through an understanding of the historical flaws and advances in the field of character education. In his view, education, combining cognitive tools and the communicative and dramatic skills of these experts, mediators, and role models, is a pivotal element in today’s fight for integrity.

Oumaima Ajmi’s essay goes to the heart of the practical and ethical challenges facing academic integrity in these times of academic and public health crises: the implementation of an electronic tool to monitor online examinations, now widespread due to the COVID-19 pandemic. Through a resolutely systemic approach, the author provides a thought-provoking overview of the actions taken by everyone concerned in the academic world. Thus, beyond the deterrent function of this tool, which has effectively prevented cheating on a massive scale, its real interest in the context of integrity training is to be found in the pedagogical debate and the awareness of honest practices that it has generated in the university community.

⁵⁵³ E. Morin, *La tête bien faite. Repenser la réforme, réformer la pensée* (Paris: Éditions du Seuil, 1999).

Focusing on master's theses and doctoral dissertations, Michelle Bergadaà and Martine Peters' approach is both diagnostic and preventive: to instill academic integrity in the minds of university students in the long term, it is necessary, above all, to understand and explain the stimuli that lead them to plagiarize, and the real meaning they attribute to this practice. Professors may then take on the role of 'integrity brokers' who build ethical values into the fabric of all their courses. But the authors' approach is also praxeological and palliative. Rather provocatively, and with high hopes, they stress the capacity, through proper guidance, to develop the therapeutic and creative potential of 'copy and paste'.

As a deterrent tool, there is no doubt that content similarity detection software is now essential to combat plagiarism and catch cheats. Frédéric Agnès takes us on a journey through the intricacies of the technological evolution of this software, where the semantic approach has begun to outpace the syntactic approach, the effectiveness but also the shortcomings of which are well established. But, once again, as the author rightly points out, the interest of these tools in the fight for integrity is above all linked to their capacity to contribute to the creation of an environment that is conducive to the development of the values of honesty and digital citizenship.

Marc Humbert and Xavier Lambin's contribution, on non-invigilated examinations, also looks at tools that may help to eradicate misconduct in online exams. They discuss the effectiveness of a preventive strategy of sending a targeted warning to a group of students who have been previously identified as cheats. Their conclusion is clear: to ensure the fairness and credibility of the system, online exams must be monitored, but when such monitoring is not possible, this type of admonition might be a good alternative.

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TRAINING THE SAGES OF INTEGRITY

Marian Popescu

Abstract

Drawing on his experience in the field and his familiarity with theatrical techniques, Marian Popescu offers us a stimulating reflection on what he ends up calling academic "integrative ethics" and on the role that "wise men of integrity" should play in its implementation. The author develops his proposal by understanding the historical flaws and advances in the field of character education. The training, combining cognitive devices and communicative and dramatic skills of these experts, mediators and referents appears, in his view, to be the key element in the current fight for integrity.*

1. Introduction

Summer 1942. The Warsaw ghetto. A column of almost 200 children, taken from the orphanage of Dr Korczak, who accompanied them, embarked on the wagons. Destination: Treblinka. The doctor's

* Corresponding authors: M. Popescu. To quote this chapter: Popescu, M., "Training the Sages of Integrity" in: Bergadaà, M., Peixoto, P. (Eds.), *Academic Integrity: A Call to Research and Action*, Geneva: Globethics Publications, 2023, pp.513-531, DOI: 10.58863/20.500.12424/4273125 © Globethics Publications. CC BY-NC-ND 4.0. Visit: <https://www.globethics.net/publications>

fame was indisputable and the Nazis offered to allow him to leave the ghetto and pursue his career. He refused to give up ‘his’ children (whose shelter and food costs he covered by himself). The Polish doctor Janusz Korczak (1879–1942) enters legend not only as one of the great specialists in pediatrics and child pedagogy, but also as an (extreme) example of a man of integrity.⁵⁵⁴

Integrity is not just the ethic of standards to be applied. Integrity is a daily practice; it is the example we set for others. Our practice of teaching within the Center for Action, Resources, and Training for Academic Integrity (CARFIA), as well as the requests that are addressed to us during our seminars and training sessions at the Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA), are clear: how can we live a daily ethic—reflexive and inspired—and not simply apply the ethical rules of an evolving profession?

The beginnings of a new approach to integrity must therefore be rooted in the very experience of a person capable of acquiring the reflexes of the fair consideration of the integrity-related questions that arise. However, the double problem of this consideration is that for too long we have entrusted the task to specialists in the teaching of ethics and that this teaching was intended for a narrow segment of the population: doctoral students. Downstream, for undergraduate and master’s students, attention is focused on the control of cheating; upstream, for professors, the issue of integrity training seems not to arise. We are the descendants of a very specific history. Bertrand Russell modernized education following the progress of the seventeenth and eighteenth centuries under the impetus of John Locke and Jean-Jacques Rousseau, who reserved education for an elite: children from the aristocratic world. Russell democratized and opened up the educational

⁵⁵⁴ J. Korczak, *A Child’s Right to Respect* (Warsaw: Rzecznik Praw Dziecka, 2017). The original *Prawo dziecka do szacunku* was published in Warsaw in 1929. Korczak’s complete works published in Poland comprise 23 volumes.

field by jointly considering the education of intellect and character.⁵⁵⁵ He believed that research was as important as education at the university, but that the time spent on research must be wisely used. Korczak, Russell's contemporary, published in 1929 the work that would give meaning to pedagogy by highlighting the respect due to the learner.⁵⁵⁶ Its founding principle is that children are not people in the making but people in their own right. They have the right to be taken seriously; they have the right to be treated with tenderness and respect. They must be allowed to flourish so that they can realize their personality. During the twentieth century, philosophy, psychology, pedagogy, linguistics, and language sciences took hold of the discipline of educational sciences, mainly focusing on children. Higher education gradually lost the meaning of the discoveries made in the 1920s and 1930s in psychology and education: the attention paid to students has become more and more focused on their intellectual education, to the detriment of their moral training.

Yet our responsibility to civil society at a time of significant challenge is to enable our academic systems to answer this critical question in our work on integrity: what is the relationship between the development of the intellect and the formation of character in order to respond with morality, ethics, and responsibility to the stimuli of daily life? And this concerns all stakeholders, whether they are students, teachers, university presidents, or heads of doctoral schools. Because this is the question that motivates our research. It is not a matter of how to react to extraordinary situations—the exceptional temptation to defraud or the confrontation with a great plagiarist—but of practicing integrity on a daily basis. How can we advise benevolently but

⁵⁵⁵ B. Russell, *On Education, Especially in Early Childhood* (London: Unwin Books, 1926).

⁵⁵⁶ J. Korczak, *How to Love a Child and Other Selected Works*, 2 volumes (London/Chicago: Vallentine Mitchell, 2018).

intransigently as regards integrity, whether with students or researchers, victims, witnesses, or, sometimes, fraudsters?

In this chapter, we focus not on the development of devices but on the personality of these beneficiaries of our training. The root of the word ‘beneficiary’ in Latin, is *bene*, (‘good’), which transports us directly into the realm of morality. We propose a new approach to the training of versatile ‘sages’, benchmarks of integrity, whether they are integrity trainers, ethics board chairs, ombudspersons, or institutional specialists. The approach we propose in this chapter places integrity at the heart of personality. We will show how theatrical techniques allow the development of a culture of integrity in relations between colleagues but also with different institutional, academic, and research bodies.

2. Reintegrating integrity into our systems: attempts and failures

The academic world shares with the world of organizations and companies the illusion that it is protected by the enactment of ethical standards. For the OECD, for example, ethical infrastructure is purely normative: ‘This infrastructure is based on three fundamental principles: control, guidance and management’.⁵⁵⁷ This ethic of standards, which regulates collective conduct, mainly allows organizations to turn against the employee at fault in the event of fraud. Bergadaà criticizes this organizational framework, which leads to reasoning based on a utilitarian goal: the well-being of the group.⁵⁵⁸ Thus, ethical charters inspired by English-language models make it possible to frame the effectiveness of individual agents. The persistence in seeking a solution

⁵⁵⁷ J. Bertok, ‘Getting the Public Ethics Right’, *OECD Observer*, 220 (2020), 41-42.

⁵⁵⁸ M. Bergadaà, ‘Evolution de l’épistémè économique et sociale: proposition d’un cadre de morale, de déontologie, d’éthique et de responsabilité pour le marketer’, *Recherche et Applications en Marketing*, 19 (2004), 55-72.

within these ethical norms and responding *a posteriori* to proven breaches of integrity has increased the number of active knowledge delinquents.⁵⁵⁹ Proof of this is the exponential growth in scientific fraud expressed, among other things, in the retraction of articles in academic journals.

The 1999 Bologna Process did not lead to the *creation of a common program* for trainers and researchers in knowledge transfer and appropriation that is rooted in reality and respects disciplinary specificities and European cultural differences.⁵⁶⁰ In France, for example, the Corvol report proposes a distinction between ethics and integrity different from ours: ‘A clear distinction must be made between scientific integrity, that is, the rules that govern the practice of research, and the ethics of research that address broader issues of scientific progress and its societal implications’.⁵⁶¹ Starting from this basis, the sixteen proposals in his text are all aimed at framing ethical standards, as in proposal 14: ‘Develop and disseminate a structuring national reference text that, among other things, strengthens scientific integrity in institutions’. When we talk about education, we still talk about the intellect in order to prevent mistakes, fraud, and conflicts of interest, but not about strengthening individuals’ character. It must be said that the issue is also to lift the *omertà* governing integrity issues in order to draw up a factual, objective overview. A report on the situation in the UK states:

⁵⁵⁹ T. Foltýnek and I. Glendinning, ‘Impact of Policies for Plagiarism in Higher Education across Europe: Results of the Project’, *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 63(1) (2015), 207-16.

⁵⁶⁰ *Higher Education System Reform. An International Comparison after Twenty Years of Bologna*, ed. by B. Broucker and others (Leiden/Boston: Brill, 2019).

⁵⁶¹ P. Corvol, *Bilan et propositions de mise en œuvre de la charte nationale d’intégrité scientifique. Remise du rapport à Thierry Mandon, secrétaire d’État chargé de l’Enseignement supérieur et de la Recherche*, 29 June 2016, p. 8.

The current lack of consistent transparency means that it is impossible to assess the scale of the research integrity issue, leading to accusations that parts of the sector are policing themselves in a secretive way in order to maintain its reputation or, worse, a perception that investigations are not conducted properly in order to avoid embarrassment.⁵⁶²

Thus, the initiatives remain at a macro level, which does not bother anyone.

The main instrument of the European Union's overall strategy on research ethics—the European Code of Conduct for Research Integrity—is embodied in the initiatives of the European Network for Research Ethics and Integrity (ENERI). ENERI stresses that ‘the reliability and credibility of research and science in the European Research Area (ERA) is not only dependent on its excellence and productivity, but also raising awareness of the highest ethical standards in research and their commitment to responsible conduct of research’.⁵⁶³ A wide variety of formats (in terms of approaches, disciplines, sectors, cultures, nationalities, etc.) is evident here. The European Union has invested in developing networks to produce and disseminate lessons on integrity. Of course, we respect the results produced by networks such as SATORI, ETHICSWEB, ETINED, EnTIRE, and PRINTEGER. They are relevant for developing and disseminating ethics teachings. But, as Bergadaà points out, the question remains how can we educate about integrity when we know that, according to Eurostat, more than 725,000 people are engaged in doctoral studies in Europe, with more than 187,000 enrolments each year?⁵⁶⁴ Teaching ethics in a traditional

⁵⁶² House of Commons Science and Technology Committee, *Research Integrity, 6th Report of Session 2017–19* (London: House of Commons, 2018), p. 3.

⁵⁶³ ENERI: <http://www.eurecnet.org/eneri/>

⁵⁶⁴ M. Bergadaà, *Le temps. Entre science et création* (Caen: Éditions EMS, 2020); European Commission, *Tertiary Education Statistics*, September 2020.

classroom format, with a one-day class composed of up to fifteen students, would require over 12,000 training interventions. With such a ‘one-shot’ class, we could realistically only provide an overview of what ethics and integrity are. Many institutions are turning to teaching ethics online. As a result, our higher education programs are not anchored and supported by a culture of integrity. It is always, at best, a matter of instructing through isolated programs, usually undertaken by philosophers or theologians. Complying with codes of ethics, for example, is not a guarantee of an ethical practice in everyday life. Teaching ethics and research integrity to influence individual behavior is necessary but clearly insufficient. To maximize the quality and societal impact of research, integrity must be an integral part of the overall research and innovation process and the scientific system more generally. It must be the heart of the system and must no longer be seen as an addition and a means of creating an additional bureaucracy.

In this regard, the codes, standards, and rules offered on the websites of almost every university in Europe are simply not satisfactory.⁵⁶⁵ All preventive and punitive devices follow a purely behavioral logic by superbly ignoring the individual ‘black box’. It is therefore not surprising that many manipulators take their ease in our system invisibly and therefore in impunity. But how do we tackle the problem of how to merge integrity and daily practice head on? For the construction of a moral culture of education would call for an open culture of dialogue within universities and research groups. According to Topal, this would involve sharing and learning from each other both horizontally and vertically.⁵⁶⁶ It would therefore also be a question of reintroducing a true

⁵⁶⁵ H. Maisonneuve, ‘Development of Research Integrity in France Is on the Rise: The Introduction of Research Integrity Officers was a Progress’, *Research Integrity and Peer Review*, 4(1) (2019), Article 20.

⁵⁶⁶ J. Topal, ‘The Practice of Anti-Corruption and Integrity of Government: On the Moral Learning Side of the Story’, in *Corruption, Integrity and the Law*:

democratic debate on integrity in the very heart of our institutions instead of talking about fraud as a shameful disease until a highly publicized case briefly attracts our attention. This would mean moving toward a true wisdom of integrity.

3. Training sages of integrity

A quotation by Arnold S. Relman, editor of the *New England Journal of Medicine*, frequently repeated since 1983, formulates the paradoxical situation that ‘scientific research, in many ways, one of the most questioning and skeptical of human activities, should be dependent on personal trust. But the fact is that without trust the research enterprise could not function’.⁵⁶⁷ Indeed, in daily life at the university, each of us—students, researchers, librarians, laboratory assistants, or teachers—is confronted with ethical questions that we would like to discuss with an enlightened person in confidence. But that confidence is deteriorating. The cause of this is a variety of weaknesses—treated admirably in fiction by a famous chemist, Carl Djerassi, in his novel *Cantor’s Dilemma*—as we have pointed out.⁵⁶⁸ These weaknesses erode confidence in publication activity (priorities, order of authors, choice of journal) and collegiality and brutally distort competition, academic tenure, scholarships, and the Nobel Prize or show off the joys of bad practices. Crease points out: ‘Considering its critical role in science, it is quite surprising that trust is not the focus of more research. One reason for the lack of attention is that a vast interdisciplinary effort is

Global Regulatory Challenges, ed. by N. Ryder and L. Pasculli (London: Routledge, 2020), pp. 268-85.

⁵⁶⁷ A. S. Relman, ‘Lessons from the Darsee Affair’, *The New England Journal of Medicine*, 308(23) (1983), 1415-17, p. 1415.

⁵⁶⁸ C. Djerassi, *Cantor’s Dilemma* (New York: Knopf Doubleday, 1989).

required'.⁵⁶⁹ Based on our experiences at CARFIA and IRAFPA, we are convinced that the only viable strategy to strengthen integrity in the academic and research world relies essentially on *trust*.

To be clear, educational strategies miss the point: the compelling, persuasive, operational dissemination of a culture of integrity as an effective vehicle of moral values that ensure the credibility of the production and, especially, the transmission and transfer of knowledge. To avoid what we have called the 'Tartuffe effect', which is pretense and imposture in its various forms, the academic and research community is called upon to fundamentally review its relationship with academic integrity.⁵⁷⁰ It is about getting back to the roots, beyond bureaucracy, and creating a real operational culture within institutions. If a person has this broad, deep culture of integrity, they will have the confidence of their colleagues or students and will be able to listen to and advise them.

The question is not how to train our students, or even the professors who will teach ethics, about integrity. *Train-the-trainers* programs already exist, such as The Embassy of Good Science.⁵⁷¹ The ones we need to help today are our colleagues, the 'sages of integrity' who work every day in a complex environment that is conducive to the emergence of dilemmas such as the urgency of publishing and the urgency of conducting in-depth research. Because we, as researchers and university instructors, are transmitters of knowledge. Because we live every day among our doctoral students and young colleagues, we are also mirrors that allow them to develop a character of true integrity. This is how the

⁵⁶⁹ R. P. Crease, 'The Paradox of Trust in Science', *Physics World*, March (2004), 18.

⁵⁷⁰ M. Popescu, 'The Tartuffe Effect or a Theatre of Ethics', Paper presented at the SRS Conference, Society for Romanian Studies, 26–30 June 2018, Bucharest.

⁵⁷¹ The Embassy of Good Science, *Training*, 2020.

culture of integrity spreads. But the question remains how to get them to ask us when they have questions about integrity.

Why is it so difficult to define integrity and to place it at the heart of the knowledge we seek to discover, communicate, and teach? Because there is not yet a language of integrity that would go beyond integrity regulations, codes, standards, or guidelines. So there is also no culture of integrity that any of these might carry. Let us try to promote the imagination which, according to Chavel, is ‘mobilized to answer the question *how do we reason morally in context?*, and not *what is a just action in general?*’.⁵⁷² Thus, the focus becomes ‘the singular process of our moral thinking, on the particular implementation of concepts, principles, and theories.’ So we need to communicate with each other in a new language—*integrethics*—through which the proximity of ethics and integrity is more understandable, more humane, and less bureaucratic in the day-to-day practices of the university.

Let us imagine a way to understand this integrity. The Greeks did not have a term for ‘integrity’, but they developed the cult of *physical integrity* and the quest for the beauty of the human body. They preferred to speak of psychic unity reflected in non-contradictory behavior with a view to harmony. Thus, the process of civilization depends essentially on the ability to correct the lack of harmony of psychic functions. Consequently, a responsible person is always responsible in relation to the relationship that links intellectual honesty and decent behavior in a person of integrity.

Who are the sages of integrity who perceive themselves—or are perceived—as such? Could it be a professor? A young researcher who explains the rules of the ERI to colleagues? The director of a private laboratory? An inspector on a fraud commission? In our opinion, a sage

⁵⁷² S. Chavel, ‘L’imagination en morale dans la philosophie contemporaine de langue anglaise’, *Revue philosophique de la France et de l’étranger*, 136(4) (2011), 543-62.

of integrity is anyone who wants to acquire or strengthen their in-depth culture. For the people we receive in our classes are not the fraudsters or the plagiarists. Those people avoid us! The ones who participate in our training are already people who play an active role in their scientific or academic community. They are reinforcing a commitment they have already made.

What are they looking for from us? Unfettered speech and distinctive skills in the first place. Our method consists of a bottom-up approach, with an inductive research and training method. We also choose a cross-cutting approach to foster mutual enrichment around a fundamental identity: dynamic questioning rather than normative ethics, which also affect the personal development of participants in ‘dramatic’ situations. We use the word ‘dramatic’ in its original Greek sense (*drama* = ‘action’). Our educational project aims to achieve a high degree of excellence by training a sufficient number of (1) heads of doctoral schools; (2) institutional integrity officers; and (3) administrators or managers of commissions of inquiry. So yes, there will be a real culture of integrity. Our pedagogical approach does not determine ‘what’ is taught, but rather ‘how’ to provide the skills and knowledge that are essential in terms of academic integrity. We give participants a tool box that allows them to intervene on a daily basis.

4. The content of the knowledge to be shared

Our strategy seeks to foster the emergence of a culture of integrity by working with these sages of integrity, encouraging interaction between different levels of training, partnering experienced researchers with young instructors (peer learning methodology), and raising participants’ interest in ethical questions through engaging, participatory methodologies based on the co-construction of learning. For example, during our seminars, we give a three-part training course that takes place

over two and a half days during which the three parts described below take place in the morning, afternoon, and evening.

4.1 Knowledge transfer: Cognitive training

IRAFPA has developed turnkey tools that are transferred to participants. Participants can acquire them in workshops and small multidisciplinary groups. Thus, we work on the following themes (adapting the importance attributed to each to the participants' needs): the obligation of responsibility that elites (here, academics) must assume; the dimensions of integrity ('Morals', 'Deontology', 'Ethics', and 'Responsibility') in the analysis of decisions; the grid for assessing the ten potential consequences of an integrity breach (their nature and importance); laws and regulations that exist in participants' countries; copyright, defamation, slander, intellectual property; how to detect a knowledge delinquent (how do they become one?); recognizing and knowing how to interact with the different individual profiles of knowledge delinquents; analyzing plagiarism methods and preparing objective, factual records; conducting mediation; the art of negotiating a difficult situation; public communication techniques using recent discoveries, as well as those of Richard Bauman, who considered forms of communication as social resources, real 'equipment for living'; documenting a complaint; identifying the 'frame' in the sense of Gregory Bateson; etc.⁵⁷³

As we can see, these are pragmatic skills that allow our sages of integrity, whether they are ombudspersons, directors of doctoral schools, or integrity gatekeepers, to adopt a posture that is more balanced than emotional. To transfer these competences, we use the case method (IRAFPA has 300 real-world cases, compiled over the last ten years).

⁵⁷³ R. Bauman, *Verbal Art as Performance* (Long Grove, IL: Waveland Press, Inc., 1984); G. Bateson, 'A Theory of Play and Fantasy', in *Steps to an Ecology of Mind* (Chicago/London: University of Chicago Press, 1971), pp. 67-73.

The cases take the cultural and research context into account in addition to generic guidelines that transcend cultures and domains. The choice of cases used is adapted to the topic in question and does not claim to cover all possible problematic situations.

4.2 Emotional appropriation through communication and theatrical techniques

Unlike the previous phase, the aim here is to really challenge the participants. In ‘The neurobiology of trust, Zak and others note that the hormone oxytocin, which generates trust in human relationships is secreted very little in our institutions.⁵⁷⁴ Our goal is to restore participants’ trust in themselves, which they can then spread around. By acting as a teacher with student-actors or directors, we have observed that one of the main problems for participants is agreeing on a kind of pact of trust before moving on to discover the roles they need to learn. Our exercises to facilitate *parrhesia* in the historical Greek sense—that is, free speech beyond the techniques of rhetoric, as understood by Foucault—are similar to those we use in our academic integrity courses at the master’s and PhD levels.⁵⁷⁵ It is always a question of preparing the participants so that they can freely approach sensitive questions that are usually kept quiet. After the creation of CARFIA, the first university center on academic integrity in Romania, one of our challenges was, and still is, to encourage, through workshops, debates, small productions, and simulations, a freedom of speech that opens participants up to an ethic expressed as an inner strength anchored in their personality.

In order to address and develop the sages of integrity’s *parrhesia*, we have created a series of events at IRAFPA entitled the ‘Theater of

⁵⁷⁴ P. J. Zak, R. Kurzban, and W. T. Matzner, ‘The Neurobiology of Trust’, *Annals of the New York Academy of Sciences*, 1032(1) (2004), 224-27.

⁵⁷⁵ M. Foucault, ‘The Meaning and Evolution of the Word “Parrhesia”’, in *Discourse and Truth: The Problematicization of Parrhesia* (Six Lectures Given by Michel Foucault at Berkeley, Oct-Nov. 1983); Rojas, 2012)

Integrity', which stage moral dilemmas. We have observed such dilemmas in all the mediations we conduct.⁵⁷⁶ These might concern cases of academic misconduct, complicity of certain institutional players in the field of education, members of academia, or professional and parliamentary bodies. The Theater of Integrity is mainly based on an ethic of participatory theater in higher education and uses theater tools to train young academics by allowing them to actively participate in open debates through a method like Augusto Boal's, the improvisation techniques created by Viola Spolin, stage productions, role-playing, or acting.⁵⁷⁷

Our theater of integrity uses a variety of means, ranging from dramatized open debates to real one-act theatrical performances. Thus, we introduce improvisations based on real cases where one of the protagonists, for example, plays the role of a fraudster who minimizes his offenses and the other an ombudsperson who tries to make him face up to his responsibilities. The other participants debrief on what they learned from the positions of the two protagonists. But we also propose three role plays developed thematically around plagiarism, institutional procedures, and scientific fraud. Each role-playing game is implemented in the form of an educational detective story where one participant plays an investigator looking for administrative and procedural problems and not only for the faults of the suspect, who is too often the 'ideal culprit'. The other participants play the roles of the different stakeholders, integrating their specific reasoning and decision-making methods. These games are presented as detective stories in which the moderator of the

⁵⁷⁶ M. Bergadaà, *Le plagiat académique: Comprendre pour agir* (Paris: L'Harmattan, 2015).

⁵⁷⁷ A. Boal, *Games for Actors and Non-Actors* (London: Routledge, 1992); V. Spolin, *Improvisation for the Theater* (Evanston, IL: Northwestern University Press, 1999).

simulation can provide clues but never a solution. As the game unfolds, additional information is provided when requested by the participants.

4.3 Democratic debate

The third part of the training, which is usually at the end of the day, takes us back to the Greeks. For the Greeks, a barbarian was someone who did not know Greek, that is to say, who was ignorant of logic and dialectics and did not master the art of speech. How could he teach others? Legitimacy is not conferred by winning elections but by governing, making decisions for the *polis*, for the state as a whole. Interestingly, the word *barbaric* has the same root as the word for stuttering. To the Greeks, the language of the barbarians sounded like endless stuttering. If you stutter, you will not be legitimate.

We reintroduce the political debate using the techniques of public speaking, the art of arguing. In groups of two or three, participants should discuss a term chosen from the body of significant concepts of ‘integrity’. For example, ‘the duty to denounce fraud’ or ‘academic freedom versus academic duty’. Then, the debaters must express their conclusions to the group in order to convince them.⁵⁷⁸ They must then apply a form of speech act in order to be both convincing and seductive.⁵⁷⁹ Thus, performative acts in Austin’s sense allow them to develop these skills to promote integrity. In this way, they participate in IRAFPA and in consolidating the common language of *integrethics*, which we mentioned above.

⁵⁷⁸ P. Charaudeau, ‘La situation de communication comme lieu de conditionnement du surgissement interdiscursif’, *Revue Tranel*, 44 (2006), 27-38.

⁵⁷⁹ J. L. Austin, *How to Do Things with Words* (Oxford: Clarendon Press, 1962).

5. Conclusion

Training the sages of deontology and integrity is an extraordinary undertaking the achievement of which could establish a true culture of integrity in our institutions and in interpersonal relations within our communities. The road ahead will be long. What IRAFPA offers to participants in its training is not only to showcase their expertise in integrity but also to use communicative and theatrical techniques to manage the approach to vulnerabilities and institutional responses to a lack of integrity.

Our project therefore aims to transmit all our knowledge to the sages of integrity so that, in their turn, they know how to free individual speech, through the exercise of *parrhesia*, because what victims or witnesses, whether they are students or colleagues, very often need is to be able to talk sincerely and in confidence. Second, our method fits into Austin's approach because the sages of integrity have already made their choice: they want to be able to produce 'performative' statements, that is, discourse that does not seek merely to describe the faults of our academic universe but rather to act upon it by the action they induce.

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IMPLEMENTATION OF AN E-PROCTORING SOLUTION FOR ONLINE EXAMS: STUMBLING BLOCKS FOR TRUST

Oumaima Ajmi

Abstract

The case illustrates the difficult, but successful, journey of choosing and implementing an e-surveillance tool in a Swiss public university during the COVID-19 health crisis. The importance of this case is to show the difficulty of using new technologies in the public administration, given the conjuncture of several aspects in this type of project, especially for academic projects. This feedback also shows the technical, pedagogical and ethical challenges to be consolidated in order to maintain academic integrity in times of crisis.*

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1. Introduction

Our academic system is based on a fundamental concept: *trust*. Trust is anchored in the relationship between a student and his mentor, a doctoral student and her thesis director, an author and the editors-in-chief of journals, and a reader and an author. Indeed, the cases of plagiarism and cheating that have always existed among students have been taken extremes, as evidenced by a growing body of literature.⁵⁸⁰ However, institutions have been able to react and put appropriate measures in place to block the temptation to cheat during exams, whether these are timed tests or thesis dissertations. For example, the University of Geneva uses software such as *Compilatio* and services dedicated to teaching ethics to students.⁵⁸¹

But what happened when the whole educational order was suddenly turned upside-down by the onset of the COVID-19 public health crisis? All educational institutions and universities were forced to close their doors quickly and found themselves facing this dilemma: how could they administer exams to their students and grant reliable, valid degrees?

It soon became clear that a miracle technological solution did not exist and that the human, organizational, and legal context had to be dealt with holistically. The rectorate of the University of Geneva expressed itself as follows: ‘Beyond the technical characteristics of the tools selected, it raises important questions: data protection, the degree of supervision necessary, weighing of interests between respect for

⁵⁸⁰ C. Gallent Torres and I. Tello Fons, ‘Intégrité académique dans l’enseignement supérieur espagnol: Des mondes parallèle’, in *L’urgence de l’intégrité académique*, ed. by M. Bergadaà and P. Peixoto (Caen: Éditions EMS, 2021), pp. 55-68.

⁵⁸¹ University of Geneva, *Detecting Plagiarism with Compilatio*, n.d; University of Geneva, ‘L’UNIGE lance des cours d’éthique pour tous les étudiants’, *Le Journal*, 78 (2013), Article 4.

privacy and the need for the university to fully accomplish its teaching mission and its corollary, the control of knowledge and skills'.⁵⁸²

While the implementation had to be quick, the entire project was complex. This complexity was due to the fact that remote proctoring tools had never been used by public universities in Switzerland or elsewhere in Europe before the public health crisis.

As head of this project and thus on call since March 2020, the author of this chapter was a participant observer of this case, which required an approach that was both scientific and emphatic about understanding all the sensitivities of the stakeholders involved: students, professors, rectorate, journalists, and legal authorities. As Bergadaà does in her research methods, over the nine months of this project, we sometimes had to adopt an emic posture, allowing us to understand the feelings of the people observed; at other times, we adopted an etic posture, that led us to remain outside the research object so as not to risk influencing it with our subjectivity.⁵⁸³ In this article, we will describe the systemic approach that we adopted from the outset and the mechanisms that we put in place at the Geneva School of Economics and Management (GSEM) at the University of Geneva and how, at each stage, the recurrent issue of trust was raised.

We will present the feedback on implementing a digital remote proctoring tool during the spring semester of 2020. This experiment is not over, and adjustments had to be made for the winter 2021 exam session. We will conclude with some avenues for reflection and future action. Indeed, it is a safe bet that, even after a return to normal, higher education institutions will attempt to keep some of their exams online.

⁵⁸² Email from the Rector of 21 December 2020 on 'Coronavirus: Contrôle de la session d'examens de janvier-février // Supervision for the January/February exam session'.

⁵⁸³ M. Bergadaà, *Le temps: Entre science et création* (Caen: Éditions EMS, 2020), p. 30.

2. The institution was closed: how could we administer exams?

As the exam period approached, the issue of ‘remote exam security’ became the priority for the teaching teams in April and May 2020. Unlike their American counterparts, but like other European public universities, Swiss public universities had difficulties setting up technical solutions for exam supervision, given the significant legal requirements and the scarcity of European technical solutions.⁵⁸⁴ Distance education technologies were not in much demand before the pandemic, and the use of technology to ensure the security of remote exams was still in the exploratory stage. The use of new technologies and artificial intelligence for examinations had also been a field of applied research for several years, primarily through the initiation of the TeSLA project.⁵⁸⁵

On 25 March 2020, the rectorate of the University of Geneva decided to maintain the exam session in May and June 2020 and have it administered remotely. During regular exam sessions, some fifteen professors and assistants supervise hundreds of students bent over their exam papers, checking their identity cards and making sure they do not have any books or ‘cheat sheets’ and that their phones are switched off. Suddenly, we needed to envisage students alone in front of a screen. A

⁵⁸⁴ O. Bénis, ‘La fronde inédite des étudiants d’HEC contre la surveillance de leurs examens en ligne’, *France Inter*, 21 May 2020; Commission Nationale de l’Informatique et des Libertés (CNIL), *Surveillance des examens en ligne: Les rappels et conseils de la CNIL*, 20 May 2020.

⁵⁸⁵ ‘TeSLA system is a project funded by the European Commission. It will follow the interoperability standards for integration into different learning environment and it will be developed to reduce the current restrictions of time and physical space in teaching and learning, which opens up new opportunities for learners with physical or mental disabilities as well as respecting social and cultural differences’; TeSLA, *Trust-Based Authentication & Authorship: E-Assessment Analysis* (TeSLA Project, n.d.).

question **of trust** immediately arose: how could we prevent students from being tempted to cheat?

The first immediate solution was to adapt the conditions of the examinations to the circumstances. In collaboration with the education committee, the dean's office asked instructors to change the evaluation methods and rethink how they evaluated knowledge in their courses. Several instructors changed the way they evaluated students to continuous assessment, written work, or oral exams. However, in most cases, it was impossible to change the procedures for checking acquired skills in only two months.

GSEM is a faculty created in 2014. GSEM's student body is made up of more than 2,000 very diverse people, at the bachelor's, master's, doctoral, or professional development (Executive MBA) levels. For the May–June 2020 session, there were twenty-five written exams and 1,355 students registered for the session, which meant 5,000 examinations between 25 May and 6 June 2020, including first-year exams for classes of over 400 students for which conditions could not be changed.

We therefore had to set up an online examination procedure to do all this checking. Consequently, the second question of *trust* arose: would we be able to set up online exams that would be operational on D-Day and remain free of bugs throughout the exam period?

With the lockdown, most students had returned to their families. And it is important to remember that Geneva, an international city, welcomes students of multiple nationalities. It is therefore common to have more than forty-five nationalities represented in an auditorium of three hundred students. How could we enable students to take their exams, regardless of the quality of their Internet connections, from their homes in lockdown?

The dean's office decided to grant special exemptions to lower the pressure on students, allowing those who were afraid to take their June exams online to postpone them to the makeup session in August or the

regular session in the following academic year we hoped that the 2020–2021 academic year would take place in more normal conditions (which was not the case).

When public buildings were closed and restricted public health measures were imposed, GSEM and the management of the University of Geneva embarked on a project to find a solution to secure its online exams.

3. The importance of a multidisciplinary team for the success of the project

Since the work of von Bertalanffy, we know that a system like the one at GSEM is a whole that cannot be reduced to the sum of its parts, and that its elements are interdependent, with relations governed by rules where each contributes to the common objective of the system and is related to its environment.⁵⁸⁶ However, in the day-to-day life of a faculty, we all know that players operate independently, each guided by the logic of their interests.⁵⁸⁷ In ‘normal’ times, opportunities for meetings and debates are rare.

For the information system cluster, this was not the first project based on artificial intelligence technologies that we had put in place.⁵⁸⁸ On the other hand, given the different dimensions of setting up an e-proctoring tool, which was a complex and urgent project and which was added to the list of the cluster’s ongoing projects, we were able to rely

⁵⁸⁶ L. von Bertalanffy, *General System Theory: Foundations, Development* (New York: George Braziller, 1968).

⁵⁸⁷ M. Crozier and E. Friedberg, *L'acteur et le système: les contraintes de l'action collective* (Paris: Le Seuil, 2014).

⁵⁸⁸ An example is GSEM Bot: an automated chatbot that relies totally on machine learning technologies and aims to help future students register for the faculty’s master’s degree according to their studies. It was deployed online on 7 January 2020.

on the skills of the education committee given the different dimensions of this project.⁵⁸⁹

- Academic and pedagogical skills were represented by the head of the bachelor's program, who was most concerned with the use of the tool, and by the program advisers.
- The search for the solution and the supervision of the legal dimension was managed by the information systems (IS) project team.
- The technical aspects, deployment of the solution, and support were also managed by the IS project team.
- The student perspective was supported by the GSEM student association, with which we held discussions, adapted our communications, and explained the different initiatives of the project, and Student Services, which managed the announcements to students.
- The decision-making dimension was represented by the dean's office, which initiated the project. Its involvement and leadership guaranteed the synergy among the members of this group.

On 1 April 2020, the group defined the specifications. Based on our research on large-scale reviews, the working group highlighted the following features in order to ensure the conditions of the tests:⁵⁹⁰

- Be able to authenticate the student at the start of the exam.
- Ensure that an exam session proceeded normally by having the same authenticated students taking their exams without receiving help from third parties.

⁵⁸⁹ Education committee (COMENS): a faculty committee that meets twice a month to update study regulations and manage exam sessions.

⁵⁹⁰ N. Thompson, 'What Is Online Proctoring?', *The E-Assessment Association*, 3 April 2020.

- BE able to ensure the open book/closed book examination procedure.

The functional requirements were limited to these three points because it is evident that, in the case of a remote examination, as with large-scale in-person examinations, there is no such thing as zero risk, even in a normal exam period.

4. What solution should we choose?

A third question of trust was asked of GSEM's IS cluster: which information technology tool should we rely on to control fraud while complying with the law on public information, access to documents, and personal data protection (LIPAD)?⁵⁹¹

We investigated the solutions available on the market that satisfied the functional requirements by adding the following criteria, in order of importance.

4.1 Compliance with the data protection law:

This criterion was essential for the faculty. Exam security must not conflict with data security and students' privacy. To do this, we first looked for Swiss solutions that respected the country's data protection legislation and students' privacy.

In the absence of such a solution, we sought a European solution with an adequate level of protection. During this search, we noticed that neighboring countries, including France, were ahead of us on e-exams. A press release from the Ministry of Higher Education, Research, and Innovation in France provided a list of European solutions that complied with the General Data Protection Regulation (GDPR).⁵⁹²

⁵⁹¹ Official site of the State of Geneva, *Loi sur l'information du public, l'accès aux documents et la protection des données personnelles*, 17 October 2020.

⁵⁹² Direction Générale de l'Enseignement Supérieur et de l'Insertion Professionnelle, *Fiche 5—Examens à distance*, 2020; Direction Générale de

At the technical level, the constraints that the working group established were as follows:

- To be able to manage exams with more than 400 students.
- To ensure equal treatment, all exams must be taken at the time set out in the exam schedule, and all students must take the exam simultaneously.
- The solution had to be available for the May–June 2020 session.
- GSEM's written tests concerned both students at GSEM and those in other faculties. Because the session dates were maintained, it was impossible to postpone the exam session due to the possible unavailability of a solution.

4.2 Compatibility with Moodle⁵⁹³

Moodle, the Learning Management System (LMS) deployed by the university, is widely used by instructors and students during class sessions. The desired solution would consist in a complementary module to Moodle to ensure that e-proctoring would allow us to avoid adaptation measures. For an LMS to be an e-assessment tool, it must be accompanied by an e-proctoring system. This solution could only be adopted if it met the first three criteria.

To resolve this dual issue of legal- and security-related trust, we followed several investigation avenues, including contacting other business schools to see what they were putting in place for their exams. At that time, no Swiss institution had decided which tool to use; HEC Lausanne was at the same stage as us.⁵⁹⁴ On the other hand, the private

l'Enseignement Supérieur et de l'Insertion Professionnelle, *Fiche 6—Évaluer et Surveiller à Distance*, 2020.

⁵⁹³ Moodle: <https://moodle.unige.ch/>.

⁵⁹⁴ Université de Lausanne: <https://www.unil.ch/hec/fr/home.html>.

French business school ESC Pau had already implemented the TestWe tool for examinations.⁵⁹⁵

Although we examined multiple technical solutions for the exam session in June 2020, no solution that met all our criteria could be found on the market. We had to drop one of our requirements, and the only one we could drop was the solution's compatibility with Moodle, which was the only criterion that did not affect the security of the exams or compliance with the legislation.

4.3 The choice

We chose the TestWe solution from the list of tools recommended by the French Ministry of Higher Education, Research and Innovation in order to meet the requirements of art. 13 A, subpara. 2 to 6 of RIPAD (the articles in the Swiss data protection regulation concerning data storage in the European Union [country with an adequate level of protection], reserved possibility of carrying out audits, and cascading subcontracting, subject to the written approval of University of Geneva).

EduTech, which was founded in 2014, offers an exam management platform that includes everything from creation to consultation of copies, including correction of copies.⁵⁹⁶ Although this solution could not be integrated directly with our LMS, it had some undeniable advantages, such as the possibility of taking the exams offline, which was a solution to one of GSEM's concerns, namely enabling our students to take their exams, regardless of the quality of their Internet connection.

The implementation of this solution for our school went fast. All we had to do was import the list of students and instructors for each exam in order to create a dedicated interface. The access for instructors and

⁵⁹⁵ ESC Pau: <https://www.esc-pau.fr/>; TestWe: <https://testwe.eu/fr>.

⁵⁹⁶ MLConseil, 'Découverte des EdTech et Webmarketing', *Blog Marketing Digital*, 16 October 2017.

students was created automatically, and notifications were sent to their institutional email boxes to access their profiles.

Here are this tool's anti-cheating measures:

- Identification of the student with a photo taken the first time they connect.
- Photos taken every three seconds.
- Detection of the student's absence in front of the camera;
- Detection of the presence of a different person in front of the camera;
- In the case of closed-book exams, blocking keyboard shortcuts and access to browsers and to the hard disk (functions similar to those of SEB—Safe Exam Browser);⁵⁹⁷
- If the measures are not complied with, an alert is sent, and a review of the progress of the exam will take place afterward.

5. How did instructors respond?

Rationally considered, everything ought to run smoothly. However, the instructors were attached to Moodle, their daily teaching tool. A new question of trust arose quite quickly: could we trust the faculty to implement the solution optimally, which essentially meant in record time?

Before we implemented the chosen solution, on 20 April 2020, the dean of the faculty presented the solution to a special meeting of professors to learn about their questions and fears and encourage them to collaborate with our team. Following this, we set up a series of training courses for instructors to help them adapt to this new system. The IS

⁵⁹⁷ Safe Exam Browser: <https://safeexambrowser.org>.

cluster organized three training sessions on 28, 29, and 30 April 2020, for the instructors affected by the exam session.

Because we needed to assess the reliability and validity of the chosen solution, we encouraged the instructors to prepare mock tests, which gave them additional work. Nevertheless, it was the only way to familiarize students with the new tool. We were then able to collect all their questions online and refine finetune our IS support.

6. Students were concerned about e-proctoring

After GSEM announced on 24 April 2020 that it would be using the TestWe platform, student representatives came forward, complaining about the intrusion of this type of tool into their private lives and the processing of their data by a third party; this led to a petition and an avalanche of emails.⁵⁹⁸

The question of trust quickly became political: how could we ensure, and reassure students, that personal data would not be used by third parties or for purposes other than examinations alone?

Because of the uniqueness of the project and the nature of its purpose, we went through many ups and downs, sometimes encountering resistance that we found hard to understand since our objective was to protect our students against knowledge delinquents and protect the credibility of their degrees. However, all the conspiracy theories circulating on social networks have only increased in this pandemic period.⁵⁹⁹ As a result, legitimate and imaginary questions mingled while the urgency of the situation prevented us from taking the time to convince everyone of the validity of the solution.

⁵⁹⁸ M. Prieur, 'Examens: Un logiciel espion inquiète des étudiants', *GHI—Le Journal indépendant des Genevois*, 27 April 2020.

⁵⁹⁹ L. Broyer, 'Quand les réseaux sociaux nous font perdre la tête face au covid19', *Journal du Net*, 25 May 2020.

It was therefore necessary to demystify the concept of e-proctoring and the ideas about technical solutions, which were often close to science fiction. We explained that the monitoring functionalities could be limited to photographs of candidates or expanded to video recording during the exam and recording of the student's screen. As for data processing, this could involve the manual verification of the data by the solution providers until the tool automatically processed them using advanced technologies.

TestWe offers the possibility of photo capture and automatic data processing using machine learning technology to detect a face in a photo and authenticate this face by comparing it with a reference photo; this process is referred to as biometric authentication.

Biometric authentication is the 1:1 comparison of two photos. The result is therefore binary and no biometric template is saved. The risk with this type of solution is that someone might access these photographs and use them without the subject's knowledge. Thus, the IS cluster concentrated its efforts on promoting optimal data security in the University of Geneva's servers.

Unlike real-time remote monitoring, automatic algorithms reduce access and viewing of photographs to cases reported by the algorithms. The tool does not decide, but it alerts us. Specific people at GSEM would then verify this alert. It was essential to make it clear that the algorithm does not 'condemn' anyone; rather, it makes a preselection, and we decide what to do next, depending on what we see. Moreover, the same thing happens in person: alerts are reported by the exam proctors. These alerts are checked by the competent bodies, which will then make a decision. Lines of code are blind to ethnic origins and religious symbols and guarantee complete equality in the processing of student data without any decision-making power.

The purpose of a remote e-proctoring tool is to secure the procedure for exams that take place without the physical presence of exam

proctors. Because they use advanced artificial intelligence and biometric processing technologies, these tools generated both realistic and irrational fears.

7. Then the media got involved

Let us not forget that the general situation was already very stressful. Students' fears about the intrusion of this technology into their private lives had been widely publicized. The latest documentaries on the intrusion of tech giants into everyone's daily lives and the illicit use of data had heightened the atmosphere of fear and mistrust of new technologies. This mistrust resulted in an avalanche of newspaper articles before each exam session.

Journalists specializing in science or investigative journalism did not approach us. However, the 'mainstream' articles were based on the students' fears and did not refer to the arrangements we had put in place to ensure the security both of the exams and of students' personal data, and in particular the students' freedom to choose not to use the platform.

The report from the University of Geneva to the authorities of the canton of Geneva supported our technological choices. The university's central legal department and communications team were a great help in answering questions from the media and managing these external interactions. In the end, we obtained the consent of 95% of all students involved in GSEM's written exams. This percentage was confirmed in December 2020 for the session taking place in January 2021. In addition, since it was essential for the students to feel good about the process, the author of this chapter questioned some students on two occasions. The first was after a series of twenty-five mock exams preceding the June 2020 session; at that time, 67% of the students gave a satisfaction rating above 4/6. The second time was after the December 2020 practice exams, when 68.14% of students found the platform intuitive and easy to use. In addition, 65% of students who responded to

the second questionnaire believed that e-proctoring helped preserve the credibility of their degrees.

8. Subsequent events and measures for the January 2021 exam session

At the end of the makeup session and given that the public health crisis continued, and with it the online teaching measures, GSEM confirmed its choice to use the TestWe platform, as initially configured for the exam session of June 2020 and the remedial session of August and September 2020.⁶⁰⁰ Based on our experience, we have reinforced our requirements as described below. It must be noted here that only the supplier of TestWe agreed to implement all the modifications and adjustments we requested.

8.1 Biometric processing and legal basis

Even though the pandemic was an exceptional situation and an overriding public interest, if the chosen solution uses biometric processing to authenticate students, it is essential to ask whether there is a legal basis allowing the processing of biometric data. Although the latest version of LIPAD does not consider biometric data to be sensitive, it is essential to remember that as of 2022, they will be so considered.⁶⁰¹ On the other hand, the legal basis for acting cannot be simply an internal directive of the institution; it must be a law. In the absence of a legal justification, it is necessary to opt for a tool without biometric processing, although this necessitates an exceptional effort to have a limited number of people view students' photos one by one for exams involving up to 600 students.

⁶⁰⁰ University of Geneva, *Passage à l'enseignement à distance—Coronavirus—UNIGE*, 23 October 2020.

⁶⁰¹ Official site of the State of Geneva, *Loi sur l'information du public*.

8.2 Recognizability of collection and informed consent

Recognizability of data collection:

The collection of personal data, and in particular the purposes of the processing, must be recognizable for the data subject. This requirement of recognizability constitutes a concrete expression of the principle of good faith and increases the transparency of data processing. (LIPAD, art. 38)

In other words, we understood that we needed to be as clear as possible with our students. It was important to describe the system's functionalities, the data collected, and the type of processing carried out on these data. It was equally important to indicate the data retention period (LIPAD, art. 40) and the processing exceptions related to cases of fraud to make it is easy for students to 'know or identify the purpose(s) of the processing, whether they are indicated at the time of collection or they result from the circumstances'. All of this information must be included in the consent form. Consent is 'any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her' (GDPR, art. 11). In order to respect the possibility of accepting or refusing, students must be given an alternative. In our case, GSEM offered students the opportunity to take the exams in person in the University of Geneva computer rooms on which the software was installed.

8.3 Data security

Whether monitoring data are processed manually or automatically, it is crucial to secure the data (LIPAD, art. 37) against unlawful processing and ensure that they are kept confidential. In implementing the TestWe solution at GSEM, the data were initially stored in the AWS cloud in France.

It is important to emphasize that the use of the cloud is still problematic and requires a significant effort to verify the often complicated processing on these private platforms, which frequently makes use of automatic processes specific to these platforms.⁶⁰² On the other hand, this requires negotiations with the solution provider because it involves specific developments and an additional cost. Although this storage is regulated by RIPAD article 13A and strengthened our students' data protection, we asked TestWe to transfer data to our servers at the University of Geneva and change the legal place of the contract to Geneva. These changes were confirmed in our TestWe license.

After debate, the exceptional nature of the situation won the acceptance of cantonal officials following complex political negotiations. On 16 November 2020, the following press release was finally issued:

Thus, in view of the foregoing, the Officials therefore recommend that UNIGE renounce the use of the X software, except during the particular or extraordinary period within the meaning of the Epidemics Act, but not beyond the June–July 2021 session, and in strict compliance with the above-mentioned conditions.⁶⁰³

The press release continued,

the officials consider that the use of e-proctoring software such as X, which makes use of biometric technology, is not proportionate in the context of the administration of academic

⁶⁰² 'Le Conseil fédéral prend des mesures pour un Swiss Cloud', *24 Heures Suisse*, 11 December 2020.

⁶⁰³ <https://www.ge.ch/ppdt/doc/documentation/Recommandation-16-novembre-2020.pdf>

examinations given the intrusion it involves in the private lives of the people concerned.

However, they note that, in the event of an extraordinary situation within the meaning of the Epidemics Act, the weighting of interests must consider the extraordinary nature of the situation. Therefore, they consider that the use of software X is tolerable, in this context only, and subject to strict compliance with the following cumulative conditions:

- The exam in question concerns a considerable number of students, making it impossible to use another, less intrusive means of supervision (i.e. cohorts exceeding 200 students);
- The exam in question has a typology that implies that fraud is relatively easy to carry out by sending a third party in place of the student (e.g. exam in the form of multiple-choice questions);
- Students who do not wish to have their data biometrically processed are offered an alternative (taking the exam in person or otherwise), regardless of the constraints related to the public health situation;
- Strict compliance with the measures taken by UNIGE concerning the initial system and mentioned above (in particular, the supervision of the e-proctoring system via the adoption of an operating directive, detailed information to students, and the changes made to the contract between UNIGE and TestWe, as well as any other measure presented to limit the infringement of the rights of the persons concerned, such as the strict

data retention period or the limitation of viewing images).

Following this decision, a new development was requested from TestWe concerning exams with fewer than 200 registered students in order to allow us to deactivate biometric processing for those exams because:

Monitoring fraud and plagiarism is one of the missions of UNIGE. If this monitoring is limited to capturing sound and images without biometric processing, it, therefore, falls within the mission of UNIGE and meets the legal basis requirements laid down by LIPAD, art. 35, para. 1.⁶⁰⁴

This feature may also be offered to students if in-person exams are temporarily suspended due to force majeure connected with the current public health situation (COVID-19). The controls will then be applied *a posteriori*, and the students will have the same examination conditions.

9. Conclusion

The detection of cheating—the bane of academia—was effective, and no cases of major cheating occurred in the GSEM exams. The instructors, the students, and the students’ parents praised the considerable efforts made by GSEM in record time to secure the examinations and guarantee the credibility of the diplomas awarded. The project team worked day and night despite the complications of the lockdown to be there for students and instructors and make this project a success.

As for technical bugs, we experienced a few cases for which we quickly found solutions. These bugs were mainly due to last-minute

⁶⁰⁴ Republic and Canton of Geneva—Cantonal Data Protection and Transparency Officer, *Université de Genève—Utilisation du logiciel X*, 16 November 2020, p. 14.

changes that were not implemented by default in the platform. Thanks to the procedures put in place, the number of bugs decreased considerably during the makeup session (five cases out of 7,000 exams in the makeup session).

From an organizational standpoint, the work was complex since each decision led to a modification in arrangements that were already in place. For example, the waiver granted by the dean so that failures in the June session were not counted led to changes in the results management system. The ban on closed-book exams resulted in a specific request to disable this option at the TestWe level for each exam, followed by final validation of each exam by the IS team to minimize the risk of error.

The e-proctoring technology remains a necessary tool that mainly plays a dissuasive role because, as with exams written in person or students' essays, it is almost impossible today to detect cheating and fraud with 100% accuracy. Techniques and motivations to cheat are developing in parallel with anti-cheating tools.⁶⁰⁵ However, it is still the responsibility of academic institutions to implement the necessary tools to maintain the credibility of their degrees and establish the principles of academic integrity in this infinitely open and connected world. The rector of the University of Geneva emphasizes that

The University of Geneva guarantees both the quality and the credibility of the degrees it awards, of which its students are the primary beneficiaries. As such, it must implement the necessary means to prevent possible fraud, in person, or remotely. This control, which is common to higher education institutions around the world, is recognized as being in the public interest.

⁶⁰⁵ S. Kronlund, 'Étudiants: Les tricheurs', *France Culture*, 26 January 2021; K. Sakho and E. Viniacourt, 'Partiels à distance: Les cinq nouvelles techniques de triche', *Libération*, 12 January 2021.

However, beyond this operational success, we members of the education committee were happy to see that this experience made it possible to initiate a debate between professors and researchers from all disciplines, on a basis of equality. Together, we considered the meaning, at the educational level, of the online evaluation of knowledge, the creation of internal tools for monitoring online exams, and the critical analysis of knowledge assessment methods, all of which is articulated with the concept of academic integrity. Like the public health crisis, this intense experience inspired us, challenged us, but ultimately helped us grow.

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THE PROFESSOR: A CONDUIT FOR INTEGRITY IN THE DISSERTATION PROCESS

Michelle Bergadaà and Martine Peters

Abstract

Plagiaristic behaviour by students is still considered a deviance that needs to be prevented or cured. Prevention is achieved through training and communication and repression through manual or computerised controls. The qualitative study presented in this article shows that the practice of plagiarism by students is a behaviour that has become normalised. By understanding the logic expressed by the respondents, we argue that every teacher can be a conduit for integrity by adjusting to the challenges of the six stages of dissertation production and by knowing how to respond appropriately. Considering creacollage as a learning option opens up new perspectives here.*

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1. Introduction

When universities define mechanisms to curb student plagiarism, it is generally from the perspective of identifying fraudulent students; for example, through the use of text-matching detection software. However, this type of software, although useful for curbing massive fraud, has little impact at the individual level. More often than not, it caters to the myth of external control for students and professors alike. It cannot stop sharp practice by people who clearly wish to defraud by their extensive usage of paraphrasing and machine translation software, or their willingness to pay for the services of a ghostwriter.⁶⁰⁶ Furthermore, when researchers address the issue of student fraud and plagiarism, it is generally seen as a form of deviance. In contrast, Stoesz and Yuditseva demonstrate that prevention is preferable to *a posteriori* control and punishment.⁶⁰⁷ Prevention strategies fall into two broad categories. A first type of strategy is to eliminate, or at least reduce, contextual factors that contribute to the propensity to plagiarize.⁶⁰⁸ A second type of action is to require students to undergo academic integrity training, in the form of workshops delivered by professors with expertise in this field or tutorials.⁶⁰⁹

⁶⁰⁶ M. Bergadaà, *Le plagiat académique: comprendre pour agir* (Paris: L'Harmattan, 2015).

⁶⁰⁷ B. M. Stoesz and A. Yuditseva, 'Effectiveness of Tutorials for Promoting Educational Integrity: A Synthesis Paper', *International Journal for Educational Integrity*, 14(1) (2018), 1-22.

⁶⁰⁸ F. M. Husain, G. K. S. Al-Shaibani, and O. H. A. Mahfoodh, 'Perceptions of and Attitudes Toward Plagiarism and Factors Contributing to Plagiarism: A Review of Studies', *Journal of Academic Ethics*, 15(2) (2017), 167-95.

⁶⁰⁹ M. Bergadaà and others, *La relation éthique-plagiat dans la réalisation des travaux personnels par les étudiants* (Geneva: University of Geneva, Commission on Ethics and Plagiarism, 2008); M. Peters, T. Boies, and S. Morin, 'Teaching Academic Integrity in Quebec Universities: Roles Professors Adopt', *Frontiers in Education*, 4(99) (2019), 1-13.

However, the premise of transgression prevention mechanisms implies *de facto* that this social norm exists, and that it is known by all. Thus, offenders know that their behavior is forbidden. In fact, these explanations are all based on the same cornerstone: delinquency is behavior that deviates from the system approved by society.⁶¹⁰ It is to be feared that this starting point tends to lead to a search for stricter standards, while the ways of circumventing them multiply.

What if transgression has become commonplace because of ‘digital natives’ and the omnipresence of technology in our personal and professional lives? What if we accepted that digital ‘scrapbooking’ is now a fact? We should then agree with the final proposal of Peters and others: that it is up to every professor, not just designated specialists, to take responsibility for teaching integrity.⁶¹¹ As integrity ambassadors, professors will reclaim their key role of embedding the promotion of academic integrity in their own courses. The empowerment of professors will result in greater enjoyment for learning for students in all scholarly disciplines, since they will be accompanied throughout their journey.

Therefore, our proposal is that a sense of integrity must be incorporated in all courses. Only then will it be possible to develop a culture of integrity in our universities. Addressing integrity issues with our students is only possible if we examine how ‘normal’ students work and do not just focus on the occasional faults of ‘deviants.’ Our research question is lucid because it has a pragmatic pedagogical purpose: How can we help our students and their professors to avoid the temptations of plagiarism when completing their thesis and dissertation work?

⁶¹⁰ H. S. Becker, *Outsiders: Studies in the Sociology of Deviance* (New York: The Free Press, 1963).

⁶¹¹ Peters, Boies, and Morin, ‘Teaching Academic Integrity in Quebec Universities’.

The objective of our exploratory research, presented in this chapter, is to examine the forces influencing the free will and integrity of graduate students, while they are completing academic work, with a view to assisting both students and professors.

2. Student interaction issues

Lang reviewed decades of research on student cheating and focused on five external causes that create an environment conducive to cheating: (1) a strong focus on performance; (2) high stakes; (3) extrinsic motivation; (4) low chances of success; and (5) a peer culture that accepts or supports cheating.⁶¹² Another external reason cited by students relates to the perception that an assessment system is unfair and the chances of success are low.⁶¹³ Individual cheating behaviors are then reinforced based on students' knowledge of standards. Thus, the weakening of social regulation influences the rate at which a deviant character is acquired, since it promotes an increase in the frequency and visibility of deviant behavior.⁶¹⁴ Scholars have long been moving away from the psychological causes of deviance by asserting that there is no deviant motivation at the outset, but that delinquent behavior can lead to deviant motivation.⁶¹⁵ Cusson identifies intrinsic factors driving delinquents to act: (1) 'Need for action' to overcome boredom, when transgressions are perceived as distractions; (2) 'Appropriation' to fulfill needs for survival or simple consumerism; (3) 'Aggression', as a last

⁶¹² J. M. Lang, *Cheating Lessons: Learning from Academic Dishonesty* (Cambridge, MA: Harvard University Press, 2013).

⁶¹³ E. Brent and C. Atkisson, 'Accounting for Cheating: An Evolving Theory and Emergent Themes', *Research in Higher Education*, 52(6) (2011), 640-58.

⁶¹⁴ V. Pillon, *Normes et déviations* (Paris: Editions Bréal, 2003).

⁶¹⁵ Becker, *Outsiders*.

resort, to retaliate against society in general; and (4) 'Dominance' to assuage a desire for power.⁶¹⁶

All of these studies share a common premise, namely that deviance from our academic norms and values results from interactions between individuals displaying behaviors considered to be poorly adjusted to their social environment. Yet Adams and Pimple suggest that there are two essential elements in any case of misconduct: the individual's propensity to engage in deviant behavior and the opportunity to do so.⁶¹⁷ It is this dual confrontation that we analyze in our research. However, analyzing the interaction between the individual and the work environment involves not merely assessing assignments submitted by students but rather examining the work accomplished throughout the process.

Our intention is to develop a better understanding and interpretation of the meaning that students attribute to plagiarism in their everyday context of writing a thesis or dissertation, and to establish the relational and interpretive significance of their actions.⁶¹⁸ It is based on this understanding that we will make recommendations for professors who deal with cases of plagiarism on a daily basis.

3. Research methodology

This research relies on a methodology rooted in facts. For eighteen months, we conducted two field studies, in Switzerland and in France, to understand the interpretation of different plagiarism temptations on the

⁶¹⁶ M. Cusson, *Délinquants pourquoi?* (Montreal: Bibliothèque québécoise, 1981).

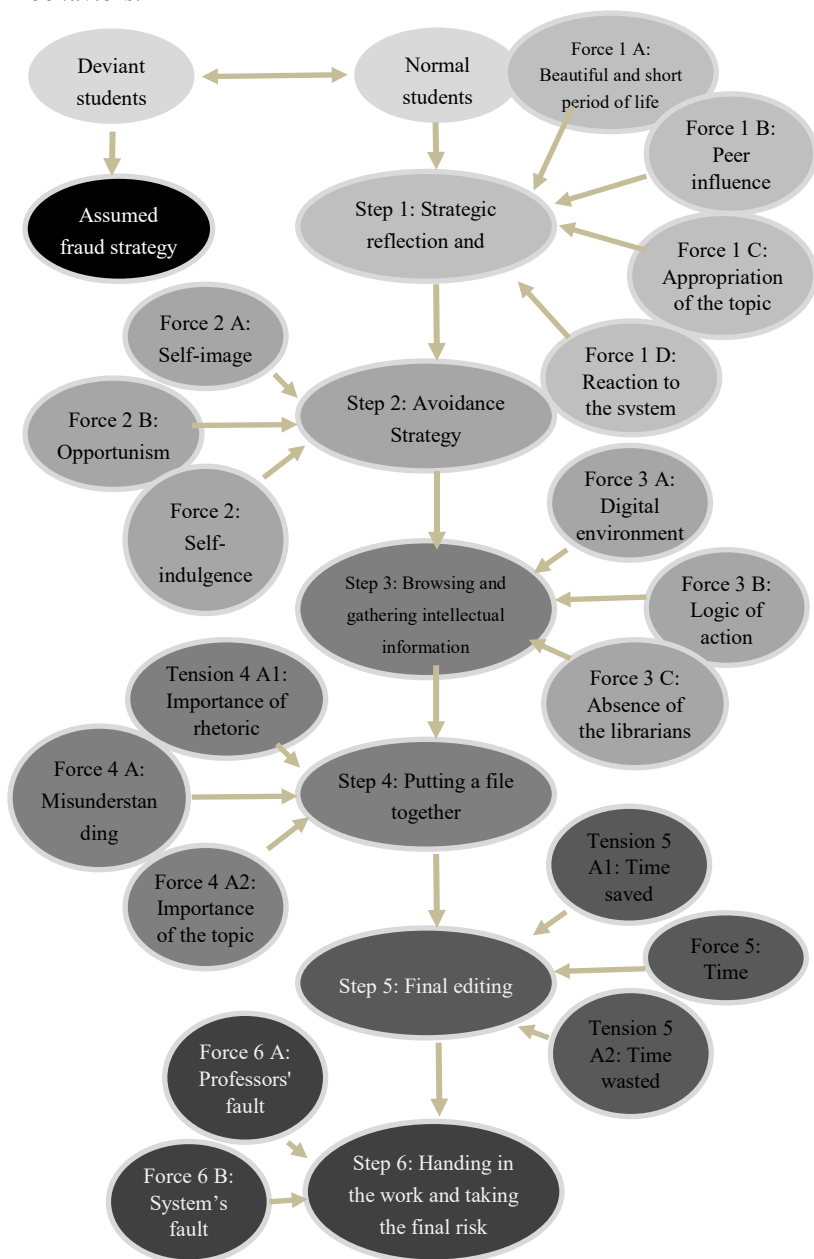
⁶¹⁷ D. Adams and K. D. Pimple, 'Research Misconduct and Crime Lessons from Criminal Science on Preventing Misconduct and Promoting Integrity', *Accountability in Research*, 12(3) (2005), 225-40.

⁶¹⁸ P. Charaudeau, 'Dis-moi quel est ton corpus, je te dirai quelle est ta problématique', *Corpus*, 8 (2009), 37-66.

Internet. We asked two neutral investigators to conduct ‘snowball sampling’. The number of participants interviewed in qualitative studies is necessarily small, because interviews are meant to probe the deeper meaning that individuals attribute to the topic of interest or to their lived experiences. Nevertheless, the sample must be large enough to allow for content comparison and to achieve satisfactory internal validity.⁶¹⁹ We interviewed twenty-five students (sixteen master’s and nine doctoral students) from different faculties and departments. The semistructured interviews were conducted using a structured interview guide. When conducting research on such a sensitive topic, it is important to ensure that the participants are in a safe space where they can freely express the sociopsychological content related to the topic of the study. The two interviewers, who were also students, reassured participants that their names or any potential identifying information would not be released. The recorded interviews were transcribed in their entirety for content analysis. This content analysis allowed for the identification of six stages in the production of a master’s thesis or doctoral dissertation. Figure 1 shows not only the six stages, but also the forces influencing students’ behaviors during the entire academic writing process.

⁶¹⁹ B. Glaser and A. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine Publishing Company, 1967).

Figure 1: Academic writing stages and forces influencing students' behaviors.



4. The trajectory of students writing theses

4.1 *Students assumed to be deviant*

Whoever has never had this happen to them should come and see me. They're liars. There's always at least one time when you're caught off guard, or for various reasons you haven't had time to study, and so you try to get out of it by any means necessary. Master's student

Two students in our sample plagiarized without remorse when writing their thesis. They explained that there are three well-known options available to students. First, they considered that using a professional ghostwriter is a good idea to avoid the risk of straying from the subject. There is a plethora of young PhD graduates offering this type of service to earn some money while looking for a permanent job. It always starts with the provision of writing assistance, leading to offers of reviewing or even drafting the entire document. One of the two fraudsters did not waste time opting for this strategy. Before the end of his PhD program, he established a website for the sale of assignments, which has since become a lucrative venture. The other interviewee felt that this practice lacked imagination and preferred to ensure quality by doing his own research to define the main elements to be included in the dissertation. Only then did he ask a ghostwriter to do the work based on this 'theoretical' foundation. Our sample did not include students who had purchased written work from online platforms on which such documents are made available.

Teaching Recommendations

The temptation to purchase an assignment can be strong for a student, since these services are readily available and can be obtained quickly.⁶²⁰ In order to avoid this type of behavior, it seems crucial that students understand why they need to do the work and that any ambiguity about its intellectual value be removed. The importance of the intellectual process must be emphasized, not just the final product.⁶²¹ It is also important to ensure that students understand the competencies to be developed before they begin the work: information retrieval, problem solving, critical thinking, argumentation, etc. In sum, professors must clearly explain the reasons for completing the work.

4.2 Work completion process for ‘normal’ students

Let us now examine students who are not deviant—or, more accurately, refuse to consider themselves as deviant—as they go through the six key stages of producing a thesis or a dissertation.

Stage 1. Strategic reflection and management in context

If you do everything that is asked of you, then you don't have much fun. You spend your time working or reading and that's not very cool. So, we do what we can, but it's nothing bad in my opinion. PhD student

According to our participants, when students receive instructions to complete a thesis or a dissertation, they will always assess the time

⁶²⁰ Tertiary Education Quality and Standards Agency (TEQSA), *Good Practice Note: Addressing Contract Cheating to Safeguard Academic Integrity* (Melbourne: TEQSA, 2017).

⁶²¹ R. Harris, *The Plagiarism Handbook: Strategies for Preventing, Detecting, and Dealing with Plagiarism* (New York: Routledge, 2001); F. D. Giezendanner, *Le plagiat dans les systèmes éducatifs* (Geneva: Département de l'instruction publique de la République et Canton de Genève, 2007).

available and their interest in the research topic. Our analysis of transcripts leads to the identification of four forces influencing students' assessment of the time allocated to the work: the importance of social life, peer influence, difficulties experienced with task requirements, and rebellion against society.

- Force 1—*The importance of social life*: The first constraint influencing students' motivation is the overwhelming feeling that they are experiencing the best, and shortest, days of their lives. They want to enjoy them. Therefore, unexpected circumstances can be used as excuses for compromising. As such, students justify their behavior in relation to opportunities that are not to be missed, such as love or sports, to name but two.

- Force 2—*Peer influence*: Students want to be like others and with others. They may succumb to temptation considering that 'everyone else is doing it'. In some instances (master's students), they follow suit if a team member gets hold of an assignment that had previously been marked and the other members of the group look no further if their name is added to the assignment before it is submitted to the professor.

- Force 3—*Difficulties experienced with task requirements*: Some students decide to plagiarize as early as stage 1, because they encounter various difficulties, either with language or with the subject matter. Thus, they want to hide their shortcomings by plagiarizing, although they are conscious of cheating. Sometimes, they do not understand the instructions, but they are afraid to ask for clarifications and expose their weaknesses.

- Force 4—*Rebellion against society*: Some students plagiarize from the outset, but 'in small doses', in reaction

to the system ('capitalist', 'uncreative', 'human machine', etc.), in which they cannot recognize themselves.

Teaching Recommendations

Students' interest in academic work should be professors' constant concern. The busier the students are (part-time job, volunteer work, or personal life), the more they will prioritize more interesting projects and put the others on hold. University is also a period of fundamental personal and social development. To take this reality into account and possibly encourage integrity, it is important to ensure that assignment submission dates are spaced throughout the semester. Consultation among professors regarding the nature of assignments and their submission dates in each course will reduce the pressure these forces exert on students' integrity.⁶²² Moreover, dividing assignments into several small sections, to be submitted at different times, can alleviate pressure on students and make it easier to support them.

Stage 2. Avoidance strategy

I'm not proud of it at all, but I'm still happy, because in a way it got me where I needed to be. It allowed me to get good grades and contributed to my overall success. Master's student

Faced with the work required, all the students in the sample first wondered how to 'avoid' the associated intellectual effort. They analyzed the terms of the assignment and asked for clarification regarding the number of pages, the font size, and the number of bibliographic references expected. Students who had to write a thesis or dissertation often started by searching for existing ones to model it on.

⁶²² D. Sauvé, 'Stratégies de prévention du plagiat', paper presented at the *Atelier CEFES sur les Stratégies pédagogiques de prévention du plagiat*, Montreal, 2007.

Luckily for them, several universities publish these documents online. By perusing these theses or dissertations, students can develop a table of contents. The omnipresence of the Web at this stage serves as a digital motivation to justify the logic of their actions.

- Students deconstruct their research topics into keywords. Then, based on these keywords, they read, perhaps even copy, material found on the Web. Our analysis reveals that three forces drive them toward this strategy of avoidance: their self-image, opportunism, and self-indulgence.

- Force 1—*Self-image*: University students are proud of their academic status and they want to be seen as good students. If they are unable to achieve good grades, it has a negative impact on their self-image, which can be unsettling. To ‘forget’ this stressful situation, they plagiarize.

- Force 2—*Opportunism*: By seizing an opportunity, students can still offer quality performance but at a lower cost in terms of time and effort. Often, they find an assignment on the Web with a title similar to the topic they are working on. If they use the document, in whole or in part, without citing it, they manage to get the grade they want without facing up to the reality of their own competencies.

- Force 3—*Self-indulgence*: This avoidance strategy results in students absolving their own actions. They forgive and tolerate their involvement in a ‘certain degree of fraud’. In this case, the common practice consists in paraphrasing a few paragraphs, here and there, from already written work. The fact that they did not download a complete paper gives them the impression that ‘it is not a big deal’.

Teaching Recommendations

Wikipedia is a key source of information for students long before they begin their university studies. They often believe that the free information found on that site can be used without citation. This belief sometimes extends to other sources, if the credibility of the author can be established.⁶²³ It is important that every professor remind students in their class of copyright and citation requirements, as well as the reliability and validity of information available on the Web. Professors should also encourage their students to seek assistance from librarians, who are underutilized experts in the field.⁶²⁴ It is not just a matter of teaching students not to plagiarize, as is often observed at institutions involved in our study. The goal is rather to ensure that students are critical when surfing websites and utilizing digital resources and guide them toward the rigorous incorporation of sources in their assignments.

Stage 3. Browsing and gathering intellectual information

*The Internet...it's like having a collaborator you don't pay,
who's efficient and fast as well! You just type a few words,
and the computer does the work for you.* Master's student

Researchers consider technology as a research avenue for their own studies and a means to enrich their reasoning. As for the students we interviewed, they see the Web as a 'self-service' store where they can find fragments of reasoning to assemble. They focus on the expected results, based on tables of contents of written work posted online. They

⁶²³ J. P. Biddix, C. J. Chung, and H. W. Park, 'Convenience or Credibility? A Study of College Student Online Research Behaviors', *The Internet and Higher Education*, 14(3) (2011), 175-82.

⁶²⁴ S. Thomas, E. Tewell, and G. Willson, 'Where Students Start and What They Do When They Get Stuck: A Qualitative Inquiry into Academic Information-Seeking and Help-Seeking Practices', *The Journal of Academic Librarianship*, 43(3) (2017), 224-31.

skip the steps of critiquing papers and articles, analyzing their significant trends, and then synthesizing their findings. Students simply gather excerpts from ready-made texts to form their own. Thus, they may use one or more different texts, like a Lego set, to construct their work. This tendency is impacted by three forces: the digital environment, the logic of action, and the absence of librarians.

- Force 1—*The digital environment*: All the interviewees had at least one computer at home. The increasing speed of domestic connections, usability and accessibility, and high-performance search engines contribute to a greater use of online resources.

- Force 2—*The logic of action*: While the professor uses the Internet to look for strategies and ideas and gather references to draft a text, digital natives use the Internet to discover texts on their topic of interest that have already been written and formatted. They learn from is the information posted online, as much as from the professor, and have been doing so for years. In their view, what is on the Internet belongs to everyone, and therefore it belongs to them.

- Force 3—*The absence of librarians*: If librarians at their educational institutions do not have the opportunity to guide students toward valuable documentary sources and online journals, it is improbable that students will reach out to them, even though librarians could assist them with the development of their competencies related to effective information searches and the critical use of information.

Teaching Recommendations

All students need to learn how to conduct searches on the Web and in various databases. However, finding information is not sufficient. According to Biddix, Chung, and Park, students need to recognize what an empirical web search is and how to find additional sources. It seems practical to assist students with identifying relevant keywords from their research topics, from their lecture notes, or even by using mind mapping.⁶²⁵ The professor can also support students during this crucial stage, by modeling the use of search engines with keywords, authors, phenomena, examples cited in class or related to the doctoral student's research topic, etc. In a master's program, the professor can ask students to log on and search, for example, for a date, a publisher, the first name of an author, or the names of the originators of a concept.

Stage 4. Putting a file together

The other student [the original author] doesn't know that you're plagiarizing him and we'd rather copy the text of someone who succeeded and got a pretty good grade. PhD student

Once this stage has been reached, students have established the structure of their thesis or dissertation and are navigating the Web freely, copying sentences and paragraphs here and there to 'bolster their table of contents'. Gradually, the number of pages of written work grows beyond the requirements. By juxtaposing excerpts on a thesis or dissertation topic, without being familiar with the term 'research subject', students limit themselves to the importance of form instead of substance. The related forces are rooted in a pedagogical misunderstanding.

⁶²⁵ Biddix, Chung, and Park, 'Convenience or Credibility?'; Thomas, Tewell, and Willson, 'Where Students Start'.

- Force 1—*The importance of rhetoric*: Even though the professor assigns a topic to students with a view to developing their basic rhetorical competencies, students think that the important thing is... the topic. In fact, the professor assigning a research topic or approving the topic of a thesis or dissertation wants students to learn how to construct an argument using classical rhetorical processes: persuasion, comparison, opposition, amplification, and recapitulation. The professor's expectation is misunderstood by students, and therein lies the source of misunderstanding.

- Force 2—*The importance of topic*: Students believe that they must present a topic but that the articulation of ideas is a separate process. They are unaware that a lack of clarity regarding their analysis of information and an inconsistent use of knowledge associated with the research topic are immediately noticeable to an evaluator. They may limit their work to juxtaposed arguments, producing an incoherent patchwork.

Teaching Recommendations

Professors must teach students to integrate information into their own written work, not to develop a text based on the information. This can be done by teaching students how to construct a textually coherent argument by using rhetorical processes.⁶²⁶ Instructors and professors must educate students in digital scrapbooking strategies, starting in high school and undergraduate programs and raise their awareness about the value and legitimacy of the copy-paste-quote process.⁶²⁷ It is also important that students learn how to incorporate other authors' work into their own.⁶²⁸ When evaluating draft copies, professors should focus their feedback on textual coherence to develop students' ability to produce work that is logical, adequately argued, and properly referenced.

Stage 5. Final editing

I was running out of time and still missing two to three paragraphs on a topic. While surfing the Internet, I came across a paper that had been turned in by a student in another country that was on exactly the same topic as mine, so I took what I needed from the existing document. Master's student

For some time now, students have focused on the form of documents instead of the substance to give their work a flawless appearance. Generally, students present their work as a text designed with evenly sized paragraphs. The size is often that of a screen page, equivalent to

⁶²⁶ O. Gagnon and A.-É. Chamberland, 'Cohérence textuelle: l'arrimage informatif', *Québec français*, 156 (2010), 78-81.

⁶²⁷ M. Peters, 'Enseigner les stratégies de créacollage numérique pour éviter le plagiat au secondaire', *Revue canadienne de l'éducation*, 38(3) (2015), 1-28.

⁶²⁸ C. Zimitat, 'A Student Perspective of Plagiarism', in *Student Plagiarism in an Online World: Problems and Solutions*, ed. by T. S. Roberts (Hershey, PA: IGI Global, 2007), pp. 10-22.

twelve to fifteen centimeters in height. Students will often shorten long paragraphs and expand those that seem too short to get a ‘polished’ document. They may be convinced that the professor, impressed by the form, will not do any kind of authenticity check or even read the whole document. In this case, the student will standardize the font size and the general presentation, in addition to including transitional sentences between paragraphs, and rewriting some sections for a better fit. Students will also include acknowledgements and a complete list of references prior to submitting the document, convinced that they are competent at synthesizing work. At this point, a temporal force stretched between two opposing tensions is exerted.

- Force 1—*Time saved*: Some students are proud of adopting time-saving practices by borrowing from uncited sources.
- Force 2—*Time wasted*: In contrast, some students consider that the process of copying information and then changing its form to avoid being accused of plagiarism is time-consuming, and thus represents a waste of time.

Teaching Recommendations

The copy-paste practice can be a creative force and not necessarily deviant.⁶²⁹ Asserting this completely changes the ‘cops and robbers’ relationship between professors and students. Professors need to teach students that copying and pasting are completely legitimate if they cite the appropriate reference and critically select their sources. It is therefore relevant to discuss plagiarism, in its various forms, with students in relation to their work progress. For example, it is more appropriate and useful, at the end of a writing process, to reason in terms of the consequences ensuing from plagiarism, such as lower grades,

⁶²⁹ F. Rinck and L. Mansour, ‘Littérature à l’ère du numérique: le copier-coller chez les étudiants’, *Linguagem em (Dis)curso*, 13(3) (2014), 613-37.

unfair rankings, or degree devaluation, than to focus on formal institutional standards and the threat of sanctions.

Stage 6. Handing in the work and taking the final risk

I'm proud that I didn't get caught, but it's still not very glorious. And happy, more or less, let's say that I avoided a lot of boring work, in my opinion, and, with practice, it is less time-consuming to rework a document [than to create it from scratch]. Master's student

When submitting their papers, students must decide: turn in a document that contains plagiarism or not. Whenever possible, students will submit their work in hard copy, because they know that it is easier to check an electronic submission. However, it is almost impossible for the final document to be devoid of any visible trace of plagiarism, considering how students complete their work. This results in students feeling uneasy and pressured by two final forces, for which the culprits are the professors and the system.

- Force 1—*It is the professors' fault*: According to students, professors do not read their submitted work completely and carefully. Some students are also convinced that professors will not check for plagiarism, mainly because plagiarism detection software is time-consuming. Therefore, professors should not be able to curb fraud. Furthermore, students adhere to the maxim, 'Others are worse than me'.
- Force 2—*It is the system's fault*: The lack of punishment was also mentioned, since students believed that professors would rather cover up plagiarism cases than deal with long and tedious processes. All the students considered that the implementation of improved grading

and checking systems would allow for the confirmation that the individual submitting the work is the actual author of the document.

Teaching Recommendations

In order to engage students, professors must convince them that they are interested in them. This would imply a real interest in pedagogy, which is not guaranteed with professors recruited on the basis of their research program who have no formal education in pedagogy. At the very least, the novice professor should mention how writing projects will be evaluated and provide a grading scale. Other pedagogical strategies may indicate the importance the professor attributes to plagiarism prevention: (1) requesting an annotated bibliography to ensure that students have read the articles being cited; (2) asking students to deliver an oral presentation to assess their level of understanding of the project; (3) meeting with students to discuss their work immediately after its submission; and (4) requiring students to submit a statement of non-plagiarism with their work.⁶³⁰

5. Final discussion

We found that the words ‘ethics’, ‘integrity’, and ‘accountability’ were not part of the students’ linguistic corpus. It appeared that they did not recognize their role in the plagiarism phenomenon. This lack of awareness results in students considering ‘unconscious plagiarism’ to be common, although this is because they do not grasp the consequences of the act for the equity and fairness in the evaluation of learning that is essential for obtaining a degree.

The first observation emerging from our analysis pertains to the rarity of ‘deviant’ students, since the practice of writing theses and

⁶³⁰ Rinck and Mansour, ‘Littérature à l’ère du numérique’.

dissertations has changed over the last few years and digital ‘scrapbooking’ has become the norm. We propose considering that students are subjected to tensions, throughout the process of writing a thesis or dissertation, that naturally lead them to contemplate plagiarizing.⁶³¹ Any response to plagiarism must be tailored to these specific tensions. It is no longer a matter of simply aiming to prevent plagiarism through warnings or awareness training *prior* to the completion of theses or dissertations, nor is it a matter of controlling plagiarism after the work has been completed and submitted. We propose infiltrating the ‘black box’ of students to discover how and when we should intervene.

When we refute the dominant paradigm of deviance and no longer consider students as ‘deviants’, it becomes possible to support them. The avenues outlined throughout the aforementioned six stages of the writing process are invitations to develop new solutions tailored to the students’ universe. At each of the six stages, we raised conceptual and pragmatic issues that must be further explored and addressed.

Indeed, professors must understand the concepts and practices underlying the world and reality that students live in. They should never consider themselves as opponents to their students, even if the latter are plagiarists, because they remain partners in their education. These students live in a digital universe and are permanently engaged with their peers via social networks. It is therefore with them and informed by an understanding of this digital experience that we must develop solutions to a problem that creates discomfort for everyone involved. There is every reason to believe that the integration of younger professors in academia, who have already acquired digital habits, will alter the perspective that both students and professors have of

⁶³¹ P.-J. Benghozi, and M. Bergadaà, ‘Métier de chercheur en gestion et web: Risques et questionnements éthiques’, *Revue française de gestion* (1) (2012), 51-69.

plagiarism. It is these younger professors who should now be interviewed to determine whether there is a generation gap between professors with respect to copy-paste practices.

A paradigm shift seems vital. It is a matter of getting away from the perspective of plagiarism perceived as delinquent behavior that must be combatted and opening the door to increased knowledge of the prevailing practices of digital scrapbooking. Then, students will be able to produce quality academic work with integrity.

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DIDACTIC EVOLUTION OF SIMILARITY DETECTION SOFTWARE: THE EXAMPLE OF COMPILATIO

Frédéric Agnès

*With the collaboration of Élodie Bresse and Lucile Guillermin, in
charge of training and support for academic integrity.*

Abstract

Since 2005, Compilatio has been offering tools to help detect and prevent plagiarism. Users of similarity detection software were initially attracted by the ability to track down cheaters. They are now more aware of the tools and services offered to create an environment that encourages the adoption of integrity and citizenship values, especially digital ones. They are aware that plagiarism is not a passing evil to be eradicated, but a deep-seated temptation that each individual must learn to overcome. The technology used to help teachers spot cheating has also evolved. The approach was initially syntactic, comparing texts formally to detect similarities. It then became semantic, using so-called artificial intelligence techniques to find similarities between different words with the same meaning. The issues related to plagiarism prevention illustrate how technology and pedagogy can be used together to train individuals for their future professional and civic life.*

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1. Introduction

When we created the Compilatio service in 2005, our ambition was to curb student plagiarism in academia. But over the years, needs have changed because of the evolution of cheating practices and the related needs of instructors. Indeed, as checks have been conducted in educational institutions, instructors' needs have become more refined. Compilatio users were initially attracted by the possibility of quickly detecting cheaters who abused the copy-paste function. They are now more interested in creating an environment that encourages the adoption of integrity and citizenship values, especially digital ones.

There is not now, and will never be, a vaccine against cheating (unlike coronavirus), and institutions rarely express a desire to unmask all cheating attempts, after the fact. Plagiarism is an easy temptation that everyone must learn to overcome. Pedagogical services, libraries, and teaching staff must support this learning process. Thus, the service we are offering today is designed to meet this need for support, in terms of early prevention.

The usefulness of similarity detection assistance software is, first, shown by its dissuasive effect. It can prevent the massive and uninhibited use of plagiarism. The implementation and use of such a tool in an institution is also an opportunity to remind students of the rules of integrity and their rights and duties toward their institution. Changing practices in the area of plagiarism prevention, are related to both educational and technological developments. These tools are factual measuring instruments; today they can reveal similarities in form, but tomorrow they will reveal similarities in meaning, with the help of artificial intelligence.

2. Changing attitudes in the support of plagiarism prevention

The idea that one can reduce plagiarism in the same way as one would eradicate a disease is illusory, because each new generation of students bears within it the seeds of creativity in circumventing instructions they consider to be tedious. Cheating has always existed. It evolves and progresses with the use of new technologies. Every year, we must start again and teach good writing and citation practices to new students. And every year, some will try to slip through the net.

Our goal is clear: to make plagiarism more complicated, more time-consuming, and more effortful for students than simply respecting copyright. The aim, of course, is to enhance the value of degrees, which depends on the strength of the skills acquired by learners.

2.1 Reveal cheating and hunt down cheats?

With the generalization of the use of word processors and the Internet in educational institutions in the late 1990s, the scope for cheating expanded considerably. The excessive use of copy-paste gives many instructors the impression that their pupils and students spend less time writing their assignments than they themselves do correcting them.

These ‘cheating opportunities’ were brought back to the forefront with the global pandemic of 2020 and the rise of distance learning and hybrid learning. At the same time, instructors are making greater use of *Compilatio* due to the increased use of distance learning, linked to the COVID-19 epidemic. It was used nearly three times more often between April and June 2020 than in the previous year, and the increase in use throughout 2020 was about 70% compared to 2019; the increase was as high as 400% during the months of lockdown.

When *Compilatio* was created, at the end of 2004, the service was first presented to users as antiplagiarism software. The first instructors who used it were partly seduced by the change in the balance of power

with cheaters. It became possible for them to identify most cases of cheating on a mass basis. Some even nursed hopes of seeing plagiarism disappear.

It soon became obvious to Compilatio users that each discovery of a case of potential plagiarism entailed the implementation of long and tedious procedures to have the cheating recognized. Instructors must deal with pupils or students who have much to lose and little to gain by making amends... They also face obstacles within their own institutions, which have a long-term interest in ensuring the quality of their teachings and the value of their degrees, but which also face the management of a difficult dispute and the risk of bad publicity in the short term. When burying one's head in the sand is the strategy chosen to resolve this dilemma, instructors can find themselves without support. They may then feel discouraged about carrying out an investigation alone, in which they would ultimately have more to lose than to gain. That is why we thought that the best way to serve our customers would be to go beyond supporting instructors in identifying cases of cheating and establishing evidence.

Certainly, the announcement that an educational institution uses Compilatio discourages massive fraud among students. But our role today is to support educational stakeholders who want to create conditions for integrity. We want to help them encourage their students to choose personal work and academic honesty over the apparent ease of cheating.

2.2 Toward the creation of conditions conducive to educate students to value integrity, creativity, and originality over easiness

Encouraging students to make ethical decisions and to unite behind the concepts of digital citizenship has become our challenge over the

past five years. To do this, we are committed to a pedagogical approach that raises awareness, rather than a repressive one based on sanctions.⁶³²

This approach, which is part of institutional philosophy, is based on several pillars that must be driven by an internal project leader and constantly communicated in positive terms to all stakeholders within an institution: management, teaching staff, students, etc.

Based on our ongoing discussions with the people in charge of implementing *Compilatio* in their schools, we have established that monitoring is necessary, but that it is not intended to punish bad behavior. On the contrary, monitoring creates an opportunity to reward both:

- students, who are rewarded for their ethical work decisions;
- the institution, which validates the mechanisms of its pedagogical approach.

Monitoring will only be perceived as a positive, rewarding process if upstream conditions are conducive to the learning and development of the digital skills associated with integrity: knowledge of indicators for assessing the reliability of sources, understanding of copyright, assimilation of citation standards, etc.

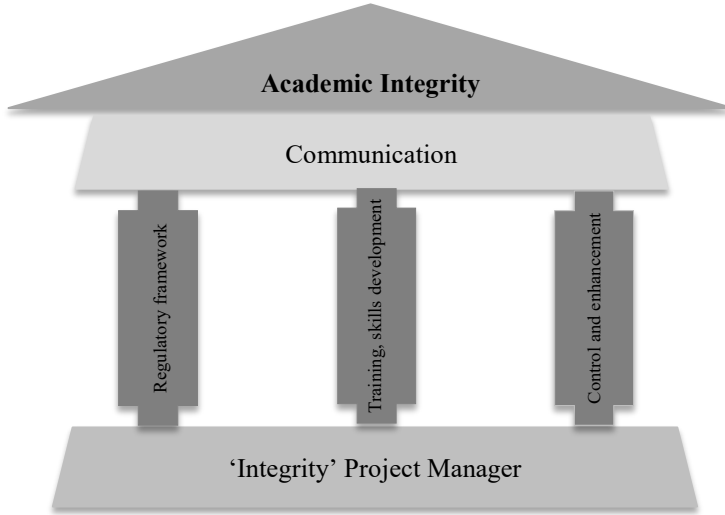
In addition, control becomes legitimate when it is supervised and when the expected behavior is made explicit from the outset, that is, from the moment of arrival at the institution. Establishing a regulatory framework then becomes very important. Defining good and bad behaviors with the associated rewards and sanctions indicates the direction—the path to follow.

Figure 1 presents the three ‘pillars of accountability’ that we propose putting in place in the institutions we support. The ‘integrity’ project

⁶³² M. Peters and S. Gervais, ‘Littératies et créacollage numérique’, *Language and Literacy*, 18(2) (2016), 62-78.

manager is the main contact person for this approach within the institution.

Figure 1: The pillars of academic integrity.



It is easy to understand the importance of this awareness-raising approach and the related issues by an analogy with road safety.⁶³³ To inform about the framework to be respected on the road, one can observe speed limit signs, advertising posters, advertising campaigns.

For plagiarism prevention at *Compilatio*, awareness-raising materials are used to communicate the rules to be followed: training sessions, workshops, plagiarism prevention posters, turnkey website dedicated to plagiarism, etc.

To assist in practice, road safety indicates how to apply the regulations: traffic laws, accompanied driving, or a driver awareness course. *Compilatio* guides its users with a *Magister* and *Studium* toolkit.

⁶³³ *Compilatio*, 'Rules of the Road, Plagiarism Prevention | 1 Goal: Responsible Behaviour', *Compilatio*, 9 April 2020.

Training and surveys are offered to academic institutions so they can learn how to recognize and prevent plagiarism.

To evaluate compliance, the speedometer is a reliable indicator used on the road. The Studium and Magister software can be used as a ‘speed camera’ to indicate whether the limit has been crossed. Indeed, the similarity rate is an impartial indication of the percentage of ‘copy and paste’ in an assignment.

To reprimand fraudsters, radar monitoring warns of danger and non-compliance with the law. It is only by highlighting a complete preventive approach that one can hope to induce everyone to clarify their values when making decisions under conflicting constraints. For students, this means a choice between:

- going faster to get a (good) mark by cheating; or
- taking the time to earn a grade and graduate without cheating their fellow students and instructors.

2.3 Putting the meaning of teaching back at the heart of the anti-plagiarism approach

In a previous article, we argued that, while the development of the Internet has facilitated the sharing of knowledge, it has also led to the idea that it is possible to access and falsify images, books, and even music.⁶³⁴ Many people believe that knowledge belongs to everyone and that it is therefore unnecessary to mention original works and authors. The question students ask themselves is a legitimate one: ‘What is my incentive to respect copyright?’

Let us be clear: people who put all their energy into deliberate cheating will not be ‘saved’ by the instructor’s use of foolproof software, because those cheaters already know that what they are doing is wrong. On the other hand, a clear signal must be sent to guide the well-intentioned in the right direction. Our challenge is to make them

⁶³⁴ Compilatio, ‘Why Is Plagiarism Prohibited? What Are My Incentives to Respect Copyright?’, *Compilatio*, 27 July 2021.

admit that plagiarism is forbidden, because a breach of copyright harms not only the plagiarized author but also all the creative people and authors whose ideas are looted. It is therefore essential to value authors and their words.⁶³⁵ As Paul Desalmand said, ‘a quotation without references is about as useful as a clock without hands’.⁶³⁶

So it is not just for the present and in relation to a particular work that we need to act but for a more sustainable education in terms of integrity. For while it is important to understand the issues at stake in not plagiarizing, it is also important to understand issues that go far beyond that, including

- educational issues: to examine the capacity to learn, acquire knowledge, integrate new skills, etc.
- professional issues: to instill the right behaviors for future professional life;
- societal issues: to be honest in all aspects of one’s life, to be an informed citizen.

So anti-plagiarism software does not have to be foolproof—which would make it fun to circumvent—but it must be credible. The zone of freedom and the zone of prohibition must be delineated and made objective so that students learn and integrate compliant behavior

If most people learn best by making mistakes, what better place for them to do so than in school? For example, instructors can turn a potential plagiarism situation into an educational opportunity. They can determine the reasons for an identified case of plagiarism and, by discussing the objective facts revealed by the software, they can ask themselves why students choose this bad behavior: ‘This understanding leads to awareness and enables adjustment of teaching methods in order

⁶³⁵ See also *Compilatio*, ‘Comprendre la nouvelle réforme européenne du droit d’auteur’, *Compilatio*, 29 May 2019.

⁶³⁶ P. Desalmand, *S.O.S. Citations* (Paris: Leduc.s Éditions, 2008), p. 237.

to avoid recurrences'.⁶³⁷ Revealing mistakes as early as possible in order to transform them into opportunities for progress is a real pedagogical act, which succeeds when behavioral change is observed.

3. Technological evolution of similarity detection software

Like the pedagogical approach, the technology used to help instructors detect cheating has evolved greatly over the past fifteen years. When they first appeared in the early 2000s, similarity detection tools such as *Compilatio* were designed to identify identical areas of text by comparing the texts formally to detect similarities. This is known as a syntactic approach, as the form (syntax) of texts is compared.

But not all cases of plagiarism are characterized by strictly identical borrowing. Today, in order to enlarge the situations of use and improve the software's performance, new technical approaches are being experimented with. It may also be possible to detect cases of paraphrasing, reformulation, or translation. Advances in artificial intelligence have allowed some promising initial experiments: in 2017, a system designed by *Compilatio* won a translation detection contest, by identifying more than 80% of the translations between two texts.⁶³⁸ These experimental advances may soon enrich similarity detection software.

⁶³⁷ *Compilatio*, 'Student Plagiarism: Create an Educational Learning Opportunity', *Compilatio*, 9 December 2019.

⁶³⁸ J. Ferrero and others, 'CompiLIG at SemEval-2017 Task 1: Cross-Language Plagiarism Detection Methods for Semantic Textual Similarity', in *Proceedings of the 11th International Workshop on Semantic Evaluations (SemEval-2017)* (2017).

3.1. Detecting similarities with a syntactic approach

The syntactic approach is the most efficient method in terms of computer processing time to reveal the most obvious cases of plagiarism, which is why it is used today in most similarity detection software.

It consists of comparing character sequences from two texts, by grouping ‘n-grams’, as illustrated in Figure 2.

Figure 2: Text comparison using clusters of n-grams.⁶³⁹

Clustering two sentences using n-grams			
		<i>‘This is a sentence.’</i>	<i>‘What a sentence is this!’</i>
N = 1 → unigrams	1	[this], [is], [a], [sentence]	[what], [a], [sentence], [is], [this]
N = 2 → bigrams	2	[this is], [is a], [a sentence]	[what a], [a sentence], [sentence is], [is this]
N = 3 → trigrams	3	[this is a], [is a sentence]	[what a sentence], [a sentence is], [sentence is this]

⁶³⁹ DeepAI, ‘N-Grams’, *DeepAI*, 17 May 2019.

<i>Comparing two sentences using n-grams</i>	
This is a sentence.	What a sentence is this!
[this] [is] [a] [sentence]	[this] [is] [a] [sentence] -no match-
this is] is]	-no match-
is a] a]	-no match-
[a sentence]	[a sentence]
this is a] a]	-no match-
[is a sentence]	-no match-

This approach has the advantage of being effective in comparing texts in any language, if they are written in the same language and they contain formally identical passages. To characterize an obvious borrowing, the quality of similarity detection depends on the correct parameterization of the analysis algorithm, according to criteria such as:

- the length of the n-grams retained, and
- the number of successive points of similarity common to both sources.

Of course, this approach has many limitations. For example, if the passages compared are too short, then ‘common’ sentences containing a few identical words could be wrongly considered as similar and generate many false positives (i.e. with the unigram comparison in Figure 2). On the other hand, if the passages compared are too long, then variations in form between two texts, such as changes in tense or the use of synonyms, will cause the recognition of similarities to fail.

The effectiveness of a software will therefore depend on the fineness of the adjustment selected by its designer, to find a fair compromise between not missing any similarities, even if this means having false

positives, and presenting only significant similarities at the risk of not detecting the shortest borrowings.

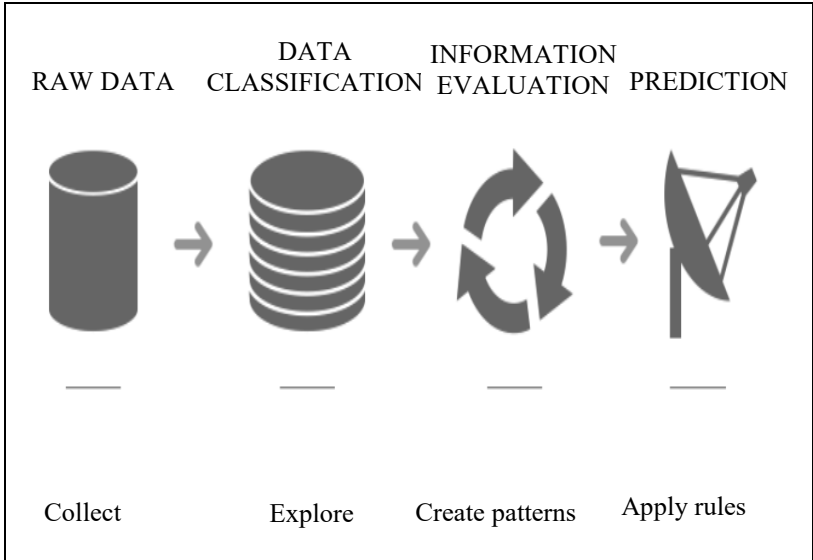
3.2. Principles and contributions of artificial intelligence

The term artificial intelligence (AI) is often used to refer to machine learning and neural networks (deep learning). The progress made in this field has applications in many areas, including text analysis. In the years to come, there will be significant improvements in similarity detection software, expanding the possible fields of application and leading to the development of software to help detect many cases of cheating.

To build an AI, you need to provide a computer system with ‘labeled’ learning data. They will enable the machine to empirically recognize (learn) rules that accurately describe the learning data set or discriminate among them. The considerable computing capacity available today makes it possible to explore all possible combinations of rules and design an effective classification or recognition method. It is therefore a question of empirically and *a posteriori* observing which rules best suit the desired task, after exploring all the possible paths envisaged by the system.

Once these rules have been ‘learned’, they are then validated on a test data set, to make sure that the rules apply to both new test data and training data. Learning is considered effective if the rules obtained apply to both data sets. It is therefore assumed that the application of these rules will be satisfactory and they can be used for the analysis of new data, for which the result of the expected processing is not known in advance (Figure 3).

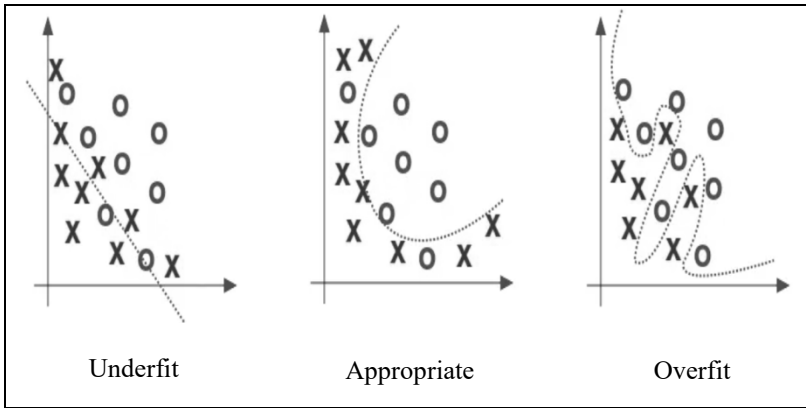
Figure 3: Machine learning: deciphering a revolution in progress.⁶⁴⁰



Even if they are applicable by ad hoc computer systems, the rules learned by the AI can be totally incomprehensible, as they are too abstract to be understood by a human mind. In addition to a suitable computer system, the first condition for setting up an AI is large volumes of suitably labeled learning data.

It may seem surprising but building learning on too much data can also reduce the AI's performance, due to the phenomenon of 'overfitting'. Indeed, overfitting the intelligence to its training data can lead to the production of a model that is too accurate or too demanding, which may deviate from the general model adapted to the task (Figure 4).

⁶⁴⁰ A. Fall, 'Machine Learning: Décryptage d'une révolution en marche', *Content Shaker*, 4 September 2018.

Figure 4: Diagram showing underfitting, ideal case, and overfitting.⁶⁴¹

The success of a neural network-based machine learning system therefore depends as much on the volume of data used for learning (training) as on the volume of data used to test and validate the model's adaptation to the desired task.

The use of AI can open many applications in the field of text analysis, for the purpose of detecting various forms of cheating. To mention a few examples of the experiments currently being conducted by Compilatio, or envisaged for the future, the stylistic analysis of a text will make it possible to detect whether passages present anomalies in relation to the rest of the document, and thus to identify passages that may have been written by different authors.

On the basis of different documents identified as written by the same author, it will be possible to determine whether a new document was written by that same author or by a third party. It will also be possible to reconstruct a plan according to the areas of text covered by main or secondary themes and the logical articulation of a text. Similarly, it will be possible to highlight the most characteristic passages of a text to

⁶⁴¹ B. Maurice, 'Comprendre overfitting et underfitting', *Deeply Learning*, 15 September 2018.

facilitate quick reading and good understanding, or to identify documents with similar structures, in terms of the topics discussed and the sequence of ideas presented, which could reveal a theft of ideas. These are all new indicators for characterizing documents and automating searching and comparison. Returning to the detection and measurement of similarities, which are often indicative of plagiarism, it may be possible to detect similarities between reformulated or translated texts.⁶⁴²

3.3. Application of AI through a semantic approach

Compilatio is currently working on the design of a AI system specializing in the detection of reformulations and translations, which are more elaborate forms of similarities than the copying and pasting detected with the syntactic approach mentioned above. To overcome the limits of the syntactic approach, it is now possible to favor a semantic approach, built using AI. The goal is to identify similarity points between two texts based on the proximity of meaning of the words used.

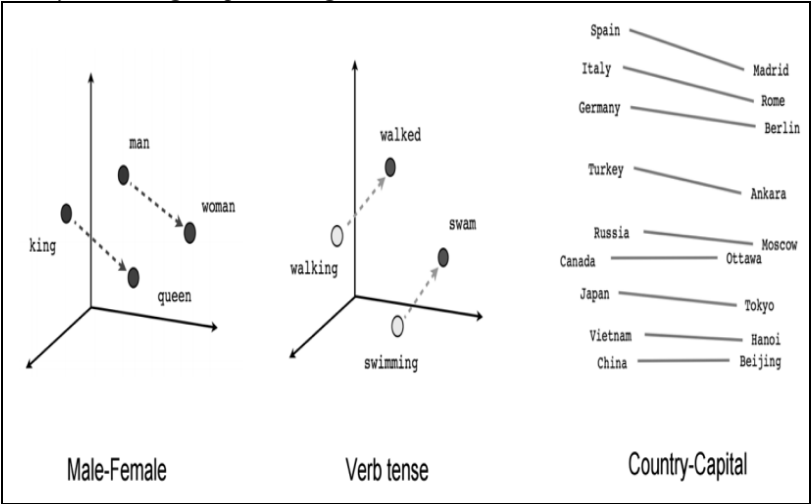
Our research focuses on the detection of similarities using the ‘word embedding’ technique.⁶⁴³ This approach makes it possible to compare two texts even if they contain only different words, or even are written in different languages. The principle is to place the words of each language in a ‘space’ constructed in such a way that words with the same meaning have close coordinates in this space. Similarly, the

⁶⁴² Many text analysis technologies already exist (NLP, Natural Language Processing services), such as www.synapse-developpement.fr, www.meaningcloud.com, www.cloudfactory.com, Microsoft Azure Cognitive Services / Language API, IBM Watson, Google Cloud Natural Language, OrphAnalytics, etc.

⁶⁴³ J. Ferrero, ‘Similarités textuelles sémantiques translingues: vers la détection automatique du plagiat par traduction’ (unpublished thesis, Université Grenoble Alpes, 2017).

distance between two words with a similar relationship is equal in each space, as shown in Figure 5.

Figure 5: Creating word embeddings: coding the Word2Vec algorithm in Python using deep learning.⁶⁴⁴



Thus, the gap between ‘man’ and ‘woman’ in a space representing terms in French is the same as the gap between ‘king’ and ‘queen’ or ‘male’ and ‘female’. The positions of the words ‘man’ or ‘woman’ in the space representing the French language will also be the same as the positions of the words ‘man’ and ‘woman’ in the space representing the English language. In this way, it is possible to measure the semantic proximity of two words, even if the words are different or belong to different languages, provided that a spatial representation of the words has been constructed in each of the languages studied.

In the long term, one can dream of an automatic system that would alert us to several kinds of similarities or cheating. We could even see the emergence of new systems capable of assisting instructors in all the

⁶⁴⁴ E. Bujokas, ‘Creating Word Embeddings: Coding the Word2Vec Algorithm in Python using Deep Learning’ *Towards Data Science*, 5 March 2020.

academic work they supervise in their review, evaluation, and correction tasks. However, pushing the capacity of machines further to detect borrowings, similarities, and all forms of resemblance, both in form and in content, will also raise new questions.

4. Conclusion

What kinds of creative capacity and reflective skills should be assessed? Where do we place the thresholds that separate an original, honest, authentic creation from a legitimate and appropriate borrowing or a reprehensible plagiarism? The emergence of new indicators will inevitably raise questions about the definition of the standards to which it is appropriate to conform, as was the case with the emergence of systems for measuring similarities between two texts, known as *anti-plagiarism software* for convenience.

The years a person spends pursuing an education represent a time for learning, experimenting, and acquiring skills and values.

Compilatio's business model is to design and propose technological, educational, and methodological tools, at the service of teaching. They are not a substitute for instructors' correction and judgment, which are part of their pedagogical mission. We reveal the similarities, but we do not judge whether or not those similarities are reprehensible.

If the major challenge for the coming decades is to reconnect with the values of integrity and authenticity, and ensure that everyone can be fully responsible, in all fields where citizenship can be expressed, Compilatio will be there to accompany the educators.

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DISTANCE EXAMS: CAN TARGETED WARNINGS DISCOURAGE CHEATING?

Marc Humbert and Xavier Lambin

Abstract

During the COVID-19 sanitary crisis of 2020, many exams were hastily moved to online mode. This revived a much-needed debate on the privacy issues of online proctoring of exams, while the validity and fairness of unproctored exams were increasingly questioned. In a randomized control trial, we send a targeted warning to half of the students who were identified as cheaters in previous exams. We then compare their cheating behavior at the final exam to the group of unwarned cheaters. Preliminary results show that the warning proves effective but does not completely annihilates cheating as the cheating strategies of some students become more sophisticated. We conclude that switching traditional exams to online mode should come with proctoring. When proctoring is not possible, credible and effective anti-cheating technologies should be deployed, together with adequate warnings.*

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1. Introduction

Online education has experienced sustained growth over the past decades. The 2020 global public health crisis suddenly made it ubiquitous and paved the way for even more extensive use in the future. Naturally, these sudden developments stimulated active debates about the benefits of online teaching and the associated risks, in particular the issue of academic dishonesty in distance exams. The stakes go beyond the already crucial issue of fairness in education, as several authors have noted a strong correlation between academic and professional dishonesty.⁶⁴⁵

Following the observation that unproctored online exams result in extensive cheating, several strategies have been proposed.⁶⁴⁶ The randomization of questions, when possible, provides satisfactory results but raises the issue of fairness between students facing different sets of questions.⁶⁴⁷ It also has technical limits, because an exam designer may not be able to find enough variations of a similar question. Online proctoring is also a popular solution but faces strong public opposition due to concerns over students' access to the necessary technologies (e.g. a webcam or a stable Internet connection) and, most importantly, privacy.⁶⁴⁸

⁶⁴⁵ D. Becker and others, 'Using the Business Fraud Triangle to Predict Academic Dishonesty among Business Students', *Academy of Educational Leadership Journal*, 10(1) (2006), 37-54; G. H. Brodowsky and others, 'Tolerance for Cheating from the Classroom to the Boardroom: A Study of Underlying Personal and Cultural Drivers', *Journal of Marketing Education*, 42(1) (2019), 23-36.

⁶⁴⁶ M. Norris, 'University Online Cheating—How to Mitigate the Damage', *Research in Higher Education Journal*, 37 (2019).

⁶⁴⁷ N. I. Nizam and others, 'Scheme for Cheating Prevention in Online Exams during Social Distancing', *Preprints*, (2020), Article 2020040327.

⁶⁴⁸ R. Bawarith and others, 'E-Exam Cheating Detection System', *International Journal of Advanced Computer Science and Applications*, 8(4) (2017), Article 4.

We propose another strategy to discourage cheating. Targeting a randomly selected subgroup of the students identified as cheaters on previous assignments (with a probabilistic, algorithmic method), we send a friendly warning stating that their copies were suspicious and reminding them that cheating on the final exam is prohibited. We observed that warnings are effective in reducing cheating, in that warned cheaters behave similarly to non-cheaters. Cheating is not, however, eliminated.

There is a rich and growing literature on academic dishonesty in higher education. A comprehensive overview of the latest developments may be found in the work of McCabe.⁶⁴⁹ We are particularly interested in academic dishonesty when exams are taken without proctoring, at a distance. Recent reviews of the literature reveal that between 60% and 90% of students admit to having cheated on such exams.⁶⁵⁰ In contrast to most previous work, which is based on anonymous post-exam surveys, we use original technologies to reveal cheating behavior. With our research protocol, cheating is not reported (as in self-reports) but revealed, which eliminates the strong reporting biases of surveys.⁶⁵¹ Furthermore, statistical approaches to the phenomenon may reveal cheating behavior accurately but fail to explain the mechanisms of cheating.⁶⁵² In our research, the status of cheater is attributed to specific

⁶⁴⁹ D. McCabe, L. Treviño, and K. Butterfield, 'Cheating in Academic Institutions: A Decade of Research', *Ethics and Behavior*, 11 (2001), 219-32; D. McCabe, 'Cheating and Honor: Lessons from a Long-Term Research Project', in *Handbook of Academic Integrity*, ed. by T. Bretag (Singapore: Springer Singapore, 2016), pp. 187-98.

⁶⁵⁰ Norris, 'University Online Cheating'.

⁶⁵¹ S. Sudman and N. Bradburn, *Response Effects in Surveys: A Review and Synthesis* (Chicago: Aldine, 1974); J. Kerkvliet and C. L. Sigmund, 'Can We Control Cheating in the Classroom?', *The Journal of Economic Education*, 30(4) (1999), 331-43.

⁶⁵² I. J. M. Arnold, 'Cheating at Online Formative Tests: Does It Pay Off?', *The Internet and Higher Education*, 29 (2016), 98-106; R. J. Fendler, M. Yates, and

individuals, which allows for a very detailed analysis of cheating strategies.

Our study also contributes to an active literature on the effectiveness of ‘nudges’.⁶⁵³ Nudges have been widely analyzed in the context of consumer choices, but also in the field of education.⁶⁵⁴ Damgaard and Nielsen described various initiatives and showed that a necessary condition for nudges to be effective is that the architect has a sufficient understanding of the behavioral mechanism underlying cheating.⁶⁵⁵ In this chapter, we study the effect of a simple, inconsequential warning on cheating behavior in subsequent exams. The warning only informs some students that their professors suspect that they cheated on the preparatory test and reminds them that cheating will be penalized on the final exam. Contrary to the studies by Bing and others and Corrigan-Gibbs and others, the treated group receives individual warnings, which makes the threat of being identified as a cheater more realistic.⁶⁵⁶

J. Godbey, ‘Observing and Deterring Social Cheating on College Exams’, *International Journal for the Scholarship of Teaching and Learning*, 12(1) (2018), Article 4.

⁶⁵³ R. H. Thaler and C. R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (Revised and expanded edition) (New York: Penguin Books, 2009).

⁶⁵⁴ H. Allcott and S. Mullainathan, ‘Behavior and Energy Policy’, *Science*, 327(5970) (2010), 1204-05; P. J. Ferraro, J. J. Miranda, and M. K. Price, ‘The Persistence of Treatment Effects with Norm-Based Policy Instruments: Evidence from a Randomized Environmental Policy Experiment’, *American Economic Review*, 101(3) (2011), 318-22; J. Beshears and others, ‘The Effect of Providing Peer Information on Retirement Savings Decisions’, *The Journal of Finance*, 70(3) (2015), 1161-201.

⁶⁵⁵ M. T. Damgaard and H. S. Nielsen, ‘Nudging in Education’, *Economics of Education Review*, 64 (2018), 313-42.

⁶⁵⁶ M. N. Bing and others, ‘An Experimental Investigation of an Interactive Model of Academic Cheating Among Business School Students’, *Academy of Management Learning and Education*, 11(1) (2012), 28-48; H. Corrigan-Gibbs

2. Experimental setting

Our experimental setting was ideally suited to the study of cheating. All aspects of the notorious ‘fraud triangle’ were present and reinforced by the 2020 lockdown.⁶⁵⁷ In 2006, Becker and others reported that business students are consistently at the top of the list of students most likely to cheat.⁶⁵⁸ That was our population. But the conditions of our exam were exceptional. First, cheating was exceptionally easy because of the particular circumstances of the COVID-19 public health crisis. The entire country was under a strict lockdown preventing any unnecessary travel. All institutions, especially schools and universities, were closed. In this context, all courses and exams at the institution where the study was conducted were moved to online mode, without any possibility of monitoring. Despite the physical distance between students, communication channels such as online messaging were available to them, raising fears of wide-ranging collaboration. Second, there were strong incentives to cheat: grades in the first year are a key determinant of access to Erasmus-type programs in subsequent years. Finally, travel restrictions made cheating attractive. Rumors on the lines of ‘everyone cheats, let’s do it’ were likely to spread...

Our database consists of examination papers from 644 undergraduate students at a French business school. We examined their performance in a series of five tests in a programming class in spring 2020. Together, these tests accounted for a very small proportion of the final grade (10%). They were used for pedagogical and participation purposes, as well as to prepare for a final exam that accounted for the bulk of the

and others, ‘Deterring Cheating in Online Environments’, *ACM Transactions on Computer-Human Interaction*, 22(6) (2015), 28:1-23.

⁶⁵⁷ M. Ramos, ‘Auditors’ Responsibility for Fraud Detection’, *Journal of Accountancy*, 195 (2003), 28-36; Becker and others, ‘Using the Business Fraud Triangle’.

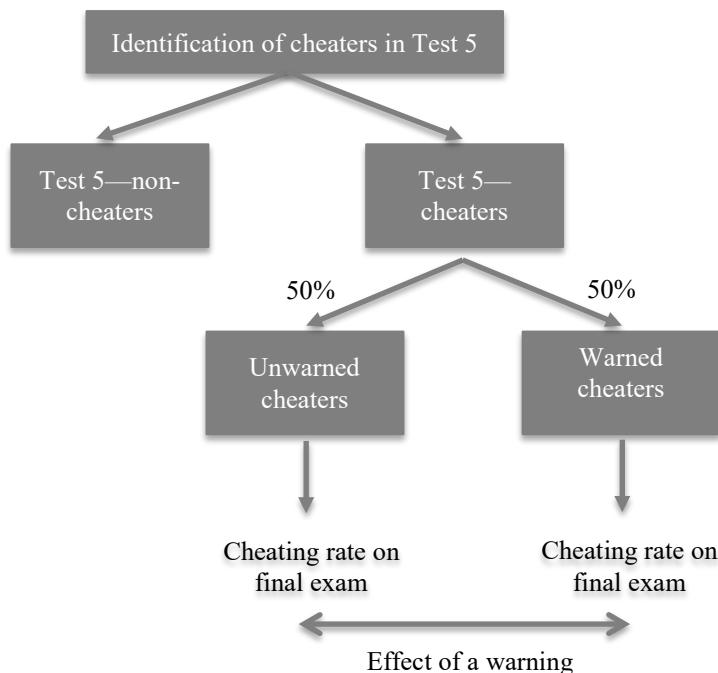
⁶⁵⁸ Becker and others, ‘Using the Business Fraud Triangle’.

final grade (90%). The form of the tests and the final exam was similar: it consisted in writing small pieces of code on an online platform and understanding written code. They differed only in their duration and subject matter. The final exam covered the whole course and lasted one and a half hours, while the tests covered chapters of the course and lasted about forty-five minutes. For the first four tests, we told students that they could collaborate if it helped them to learn more, but for the last assignment ('Test 5'), we strongly encouraged them to work on their own to prepare for the final exam, which was to be written individually. In this chapter, we equate cheating with collaboration (two or more students taking the test together or exchanging answers), as such collaboration was explicitly forbidden in Test 5 and the final exam.

We therefore used the results of Test 5 to classify students into two categories: those who cheated and those who did not cheat. We used a completely unintrusive technology to identify collaboration: we analyzed syntax (both textual and algorithmic) to identify suspicious similarities between submitted papers. The method is probabilistic, but following Test 5, we were able to identify 230 assignment cheaters out of the 644 students with a high degree of confidence. Between this last assignment and the final exam, a standard email was sent to all students reminding them of the rules of the exam and the penalty policy for cheating. In addition to this general email, half of the cheating sample also received a warning stating that they had been identified and placed on a watch list. There was no sanction, but the warning was a reminder that similar behavior during the exam would be penalized. This was the test group. The other half of the cheating group was not warned and received only the information sent to all students. This was the control group. The students who were not identified as cheaters in Test 5 constituted a 'reference' group, which we used as a benchmark. The standard email was sent two days after Test 5 and five days before the

final exam. The treatment (sending the warning to half of the cheaters) was done a few minutes after the standard email (see Figure 1).

Figure 1: The experimental protocol.



The main purpose of this report is to present a preliminary analysis of the treatment group's response to the treatment, in terms of cheating behavior on the final examination.

3. Plagiarism detection methods

We used two different types of detection methods: textual comparisons of students' answers and 'trick questions'. The second type was not used for test 5, but we kept it for the final exam because exam cheating is a learning game between students and professors. When professors introduce new technologies, students quickly learn how to avoid them.

The analysis of general textual answers has been intensively studied in the literature and has generated many anti-plagiarism solutions. They are not perfect because in the ‘learning game’ students find ways around these systems.

Our case was more specific because textual answers did not correspond to a natural language but to a programming language with its own particular syntax. This specific case has been already studied by professors of computer science but, in order to avoid attacks by students (avoidance strategies) and tailor our detection strategy to the specific nature of our exams, we developed our own text-based probabilistic algorithms.⁶⁵⁹

Papers that showed a high degree of similarity were considered to indicate a cluster of cheaters. Its constituent members were therefore labeled as ‘cheaters’. It is useful at this point to note that this strategy only gives a probabilistic estimate of cheating behavior. It is therefore an effective prevention tool, but is of little use in terms of sanctions (see the discussion), whence the need for another method.

The second method, which we used only for the final exam, consisted of a classic approach, random questions, to which we added an original touch. For each specific question (displayed to all students as, say, ‘question 8’), we randomly assigned a slightly different version of the question to each student (student A gets question 8A, student B gets question 8B, etc.). A cheater will therefore give an incorrect answer, but one that matches the correct answer to another version of the question. We designed our versions such that it is extremely unlikely that a person would give the right answer to another version without external help. Moreover, the difference between versions was only visible to particularly attentive eyes, or students who expected such a strategy to

⁶⁵⁹ O. Karnalim, ‘Python Source Code Plagiarism Attacks on Introductory Programming Course Assignments’, *Themes in Science and Technology Education*, 10 (2017), 17-29.

be deployed. Since there was no precedent of this type of ‘trick question’ in the educational institution, this was highly unlikely. Cheaters were classified as such if they gave an answer that corresponded to the correct answer to another version of the question. Because we used this method only for exams and not for assignments, students could not learn to avoid detection.⁶⁶⁰

4. Results

Our preliminary results suggest that there was some degree of cheating (about 14%) even among the reference group of students who had not been identified as cheaters on Test 5. This is not surprising, as the stakes on an exam are much higher than those for assignments and students had more time to organize their collaboration. We will call this level of cheating the ‘baseline’ level. More importantly, the preliminary regressions allow us to assess the effect of a warning on cheaters. Having cheated in assignments increases the probability of cheating on the final exam by 25% to 30%, while being warned more than offsets this effect and results in a 3% to 5% decrease in the probability of cheating compared to the baseline. This suggests that warnings are very effective at curbing cheating.

5. Discussion

A central issue in research on academic dishonesty is the estimation of the prevalence of cheating. With the increasing prevalence of online exams, we believe the need for examination methods that allow for creativity while being resistant to cheating will continue to increase in the coming years. This paper proposes solutions to increase their

⁶⁶⁰ Note that the details of our statistical analyses are presented in a longer document than this chapter and are available from the authors upon request.

robustness. As we mentioned above, our approach is based on a statistical analysis of exam responses. This approach is facilitated by the structure of our exam, which is based on the assessment of skills such as writing or understanding code. The questions are open-ended, which allows suspicious similarities to be confidently identified, as opposed to multiple-choice questions, which are by nature closed-ended and leave little room for student creativity.

However, our solution is only partial. We must keep in mind that the main objective is to eliminate or at least limit cheating. The two main levers of action are prevention and repression. We have shown that targeted warnings make prevention much more effective than traditional warnings. However, we recognize that prevention may not be sufficient. Repression (sanctions) may be necessary to reinforce preventive actions. However, although our statistical analysis provides clear indications of the probability of fraud, it does not provide sufficient evidence to trigger a sanction.

This paper examines the effect of a single treatment (a warning to cheaters). This choice was made to ensure the statistical significance of our results, given the expected effect sizes and our sample size. Our warnings proved effective for a large proportion of the cheating group, but we do not know whether the effect is sustainable or whether, if such warnings were repeated too often, they would remain credible over the long term. One avenue of research would be to determine how often messages are needed to develop honest behavior during examinations. On the other hand, the repetitive effect of messages can also be tiring and lead to an opposite effect to the desired one. Further work with researchers from the psychosocial sciences would be useful in this regard.⁶⁶¹ In future research, we also aim to test other treatments such as

⁶⁶¹ D. Courbet, I. Milhabet, and D. Priolo, 'Communication persuasive: Effets de la vivacité et de la répétition des messages sur l'optimisme comparatif et sur

training students on exam integrity and anti-cheating strategies. Indeed, behavioral change can be achieved through the use of commitment or persuasion.⁶⁶²

6. Conclusion

The COVID-19 crisis has given digital technologies a unique opportunity to highlight how they can contribute to our education systems. These technologies will become increasingly important in education not only in times of crisis, but also as a new standard for teaching. However, the crisis also revealed some of the limits of online education, including the viability of online exams. It is essential to increase confidence in the results of exams, and therefore degrees, and to limit the sense of injustice students who do not cheat are likely to feel.

The preliminary results of our randomized control experiment suggest that a credible, effective mechanism could be deployed to discipline students and restore the validity and fairness of exams. Advance warnings are particularly effective in inducing honest behavior. In light of these preliminary results, we argue that the judicious use of warnings represents a promising alternative to proctoring, especially when proctoring is not possible for either practical or ethical reasons.

We consider it necessary to develop this new line of research, as it is essential to put safeguards in place to avoid the temptation to commit massive fraud. This does not prevent the development of a reflection process on the teaching of integrity to students—in fact, quite the contrary.

l'intention comportementale', *Revue Internationale de Psychologie Sociale*, 14 (2001), 163-75.

⁶⁶² C. A. Kiesler, *Psychology of Commitment: Experiments Linking Behavior to Belief* (New York: Academic Press, 1971).

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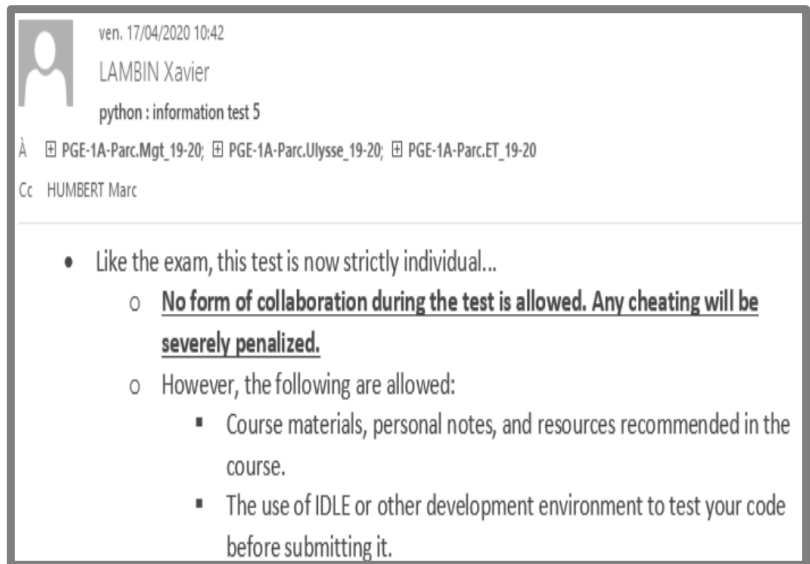
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APPENDIX 1. MESSAGES SENT TO STUDENTS

The students received two generic emails. The first one was sent before Test 5. It stated that Test 5 and the final exam were to be done individually and described the consequences of proven cheating.



The second one was sent between Test 5 and the exam. It indicated that some cheating had been observed on Test 5 and reminded students of the rules of the exam.

Rules:

- As with Test 5, this exam is strictly individual
- No form of collaboration during the review is permitted.

We have observed a number of cases of collaboration/external help in Test 5. Fortunately, a majority of you respected the rules after having accepted them. Those suspect of fraud have been notified.

We left the benefit of the doubt for Test 5, but **any proven cheating on the exam will be penalized by a mark of 0 on the exam and probably on the entire literacy module. Program management will be notified.** In case of contestation, an individual oral examination can be arranged very quickly.

In addition to these generic emails, half of the students we identified as cheaters received a warning email.



mar. 28/04/2020 19:32

LAMBIN Xavier

avertissement pour suspicion de triche / friendly warning for suspicion of cheating

#####English version

Dear student,

The analysis of your test 5 suggests a strong presumption of collaboration or call for outside help during the assessment, which is contrary to the rules you had committed to respect. We give you the benefit of the doubt for this time, and send you a simple warning email. It will not affect the rating. However, we remind you that the final exam is strictly individual and no form of collaboration during the exam is allowed. **Any proven cheating will be severely penalized by a mark of 0 in the exam and probably in the whole literacy module.** Program management will be informed.

Marc Humbert and Xavier Lambin

CONCLUSION

*Michelle Bergadaà, Paulo Peixoto**

Throughout this book, we have explored various themes that are foundational for academic integrity. We have seen that integrity is in danger at both the institutional and individual levels, in our courts and in our institutions, in how we publish our work and how we transmit our teachings. In order to reverse the trend toward a weakening of our values, it is becoming urgent to talk about integrity and to make it a daily reality. But how is integrity spread throughout the world? It is not just the responsibility of states, individuals, or even higher education or research institutions. It spreads through the many collaborative movements—or networks—that are directly or indirectly dedicated to integrity.

For more than a century, relationships between researchers of all disciplines have been subdivided by the creation of associations and the specialization of their journals. Gradually, segments of disciplines emerged, increasingly becoming what we might call hermetically separated ‘tribes’. We are now weary of the tense relations between competing institutions, which are established everywhere by the Shanghai Ranking. Because, in parallel with the configuration of the

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academic world, individual players have become emancipated and have discovered new horizons within the multiple networks to which they now belong. The problem is that people who want to be useful are confused by the large number of these collaborative movements, which are organized under a wide variety of legal statutes, and operate within a considerable number of countries or regions of the world. At the same time, the growth of academic misconduct has led to the emergence of specialized ‘integrity’ units in every scholarly association. However, when we look at the concrete achievements of this multitude of organizations, the results are cruelly disappointing: few of them provide effective mechanisms. How, then, can any player—individual or collective—find a way to get answers to their questions about integrity?

In order to understand this paradigm shift, it must be said from the outset that it is relationships—and no longer power—that are the basis of exchanges between players. The question is therefore how we should evaluate the performance of these networks.⁶⁶³ It is no longer a question of financial stakes and a competition for reputation, but a search for value creation for all stakeholders. Who evaluates their success if not national or European authorities? This new creation of value is characterized by flexibility and reactivity, both within these networks and because of the possibility for players to move from one to another according to their needs. The fluidity of these networks calls for a simple definition of how to measure their performance.

We distinguish below between two main types of these collaborative groupings; for each type, we provide representative examples of networks with which IRAFPA has positive, constructive partnerships: ‘integrative communities’, and ‘shared destiny communities’.⁶⁶⁴ And because IRAFPA is a strongly attached to its status as an

⁶⁶³ M. Bergadaà, *Academic Plagiarism: Understanding It to Take Responsible Action* (Geneva: Globethics.net, 2021).

⁶⁶⁴ Bergadaà, *Academic Plagiarism*, chap. 4.

association, we take the liberty of not giving a voice to a very particular type of collaborative movement that has been agitating in recent years: 'opportunity networks'. Such networks are sometimes created from scratch in response to calls for tender from the Council of Europe or national authorities. In that case, integrity is only a pretext to obtain funding and not the source of any real enthusiasm. Moreover, the vast majority of these 'opportunity networks' disappear when the source of funding dries up. Few of their members develop the lasting motivation and skills that the challenges of integrity in these dangerous times call for.

'Integrative communities' are the logical continuation of the professional networks that have always existed. As the term indicates, they are anchored in a 'business' logic that allows them to develop mechanisms specifying the roles of the players called upon to deliver a given service. Associations organized around scientific disciplines are integrative communities. Their aim is to qualify researchers and develop the individual careers of those who contribute to the advancement of knowledge in the discipline. We also find entities such as the *Conférence des présidents d'université* (CPU) in France or the *Association des doyennes et des doyens des études supérieures* in Quebec (ADESAQ) to be integrative communities. In Switzerland, *swissuniversities* promotes cooperation and coordination between higher education institutions. Such networks ensure the coordination of programs at the national level and represent their interests in international organizations such as the European University Association (EUA). With a common concern, stakeholders collaborate by sharing knowledge. Such network organizations enable a knowledge monitoring function and a knowledge management force to be developed. These functional networks, of which we are partners, seem to be sufficiently rooted in the academic landscape to disseminate standards and mechanisms for strengthening integrity.

We find also ‘Integrative communities’ in disciplines such as sociology that have organized themselves into schools of thought. Thus, for a long time in the French-speaking world, the ‘Bourdieuans’ were opposed to the ‘Boudonians’. Similarly, in the United States, the two Chicago Schools have opposite epistemic rules. Unlike functional networks, these community networks are rational in nature, as community networks indicate the existence of values and traits shared by members. Here we find solidarity and identity protection, insofar as members mobilize to protect a shared ideal. The very construction of ‘community’ entails an idea of giving, of responsibility toward others, by the very fact of belonging to the group joined. Like the communities of yesteryear, they are designed to last, and these networks provide security to their members through the interpersonal relationships they enable them to form.

The path chosen by IRAFPA is the path of ‘shared destiny communities’. Due to the current unsettled situation, it is essential to consolidate collaborative movements dedicated to improving academic integrity. Over the years, we have established links with many networks. The institute is driven by its resolute independence from administrative and economic constraints without religious or political affiliation. IRAFPA does not enter into a transactional logic but magnanimously offers its know-how based on fifteen years of research and action. Through the synergy that it creates with partner networks, the discourse of ethics and academic integrity is strengthened and becomes audible.

This is easy in an internationally networked, interdisciplinary organization. Those who were not comfortable with IRAFPA’s style of interaction and our simple, direct communication style have moved on. More often than not, such people are members who join for a short time, to beef up their CV or in the hope of meeting influential people. Sometimes they join at the request of a superior whom they wish to please, notwithstanding the conflicts of interest that this may entail.

People who, on the contrary, liked this kind of constant questioning and project-based organization became friends and colleagues who trusted in our common destiny. In our opinion, the core concept of such movement consists of all the means that the network uses to remain in permanent contact with the final beneficiaries of its action and to generate a response adapted to their needs. It is the final beneficiaries—the student, the researcher, the city, etc.—who count and not just the members of the network.

The integrity science movement of the future was created as a ‘free electron’ at a time when no one was yet talking about the excesses of the academic system and the risks it posed for the very future of knowledge. Little by little, through our research and our actions, through the affirmation of our values and through the establishment of norms that we propose to encourage everyone who wishes to mobilize, we have become a community. We are simultaneously a functional network, a community network, and a free network that constantly reinvents itself through our colloquia and our summer schools. For knowledge transmission will always be the outcome of our profession through our shared desire for rigorously accurate words, linking our meaning—integrity—to our interlocutors and to ‘real talk’ that allows us to express what other people do not always want to hear. It engages our performative speech. As a result, more and more of us today are joining the ‘integrity sciences’, which took years to emerge, for lack of a shared vocabulary.

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THE AUTHORS

Frédéric Agnès

Frédéric Agnès is the founding director of Compilatio, a company that offers services to help detect plagiarism and promote integrity in education. Originally from the Haute-Savoie region where the company is based, this 42-year-old entrepreneur is a jack-of-all-trades, as interested in technologies as in their uses and the changes they bring about. In 2005, he initiated one of the first studies on the importance of plagiarism in French-speaking education. He is involved in research in the field of automated language processing, particularly in similarity detection, translation, author detection and automatic summarisation.

Oumaima Ajmi

Expert in the fields of knowledge engineering and artificial intelligence, she pays particular attention to the links between the ethical, legal and innovation aspects of IS project management. After a PhD in Information Systems in 2018, she obtained a certificate in Data Protection, Compliance and Information Security. IS Project Manager at the Geneva School of Economics and Management of the University of Geneva, she manages projects related to the student pathway and the faculty's accreditation based on innovative technologies and ideas.

Pierre-Jean Benghozi

Pierre-Jean Benghozi is a CNRS research director, professor at the École polytechnique (Paris) and at the University of Geneva. A former

student of the *École polytechnique*, Pierre-Jean Benghozi holds a doctorate in organisational science from the University of Paris Dauphine and a habilitation to direct research in economics. Author of nearly 250 academic publications, Pierre-Jean Benghozi is an internationally recognised precursor of research on the economy of the Internet and the creative industries, a field in which he is regularly called upon as an expert, both in France and abroad. As a laboratory director and president of scientific councils and learned societies, he has long been involved in research management and integrity issues.

Michelle Bergadaà

Michelle Bergadaà is Professor Emeritus at the University of Geneva. After her MBA, she obtained a PhD from the joint programme of the Universities of Montreal. She published more than 150 articles in her field before focusing on integrity sciences. In 2004, she created the collaborative website "responsable.unige.ch" which still has over 17,000 international subscribers. Her book *Le plagiat académique. Comprendre pour agir* (Paris: L'Harmattan), in 2015, attracted the support of an academic community in search of methods and processes adapted to the challenges of the 21st century. She created the IRAFPA in 2016. In 2020, she published *Le temps entre science et création*, in the collection "Les grands auteurs francophones" published by EMS. She lectures internationally to strengthen the integrity science movement.

Chérifa Boukacem-Zeghmouri

Chérifa Boukacem-Zeghmouri is a university professor in information and communication sciences at the Claude Bernard University in Lyon and a member of the ELICO laboratory. Based on the theoretical framework of cultural and creative industries, her work analyses the mutations of scientific communication between peers towards open and collaborative models. His main research topics are the

new forms of creation, production, circulation, evaluation and legitimisation of scientific research.

Sarah Carvallo

Sarah Carvallo is a professor in philosophy of science, specialising in epistemology and philosophy of medicine at the École normale supérieure in Lyon. She is in charge of axis 3 of the Logiques de l'agir laboratory devoted to medical, environmental and digital humanities. She coordinates the Medical Humanities action at the Maison des sciences de l'homme et de l'environnement in Franche-Comté. She has published numerous articles in the field of integrity. Her research fields are philosophy of science, philosophy of medicine, epistemological and ethical issues and the human body as an anthropological category.

André Ciavaldini

André Ciavaldini is a psychoanalyst (Société Psychanalytique de Paris) and has a doctorate in clinical psychology (HDR). He is associate director of research at the PCPP laboratory (clinical psychology, psychopathology, psychoanalysis) of the Institute of Psychology of the University of Paris-V. From 1993 to 1996, he co-directed research on incarcerated sexual aggressors for the Ministry of Health. He wrote the specifications for the creation of the CRIAVS (Resource centres for those working with perpetrators of sexual violence) for the General Health Directorate. He will also be responsible for the referential platforms for the treatment of the same authors for the ARS Rhône-Alpes. He was the founder and first programme director of the CRIAVS Auvergne-Rhône-Alpes.

Jean-Philippe Denis

Jean-Philippe Denis is a professor at the University of Paris Saclay. From 2013 to 2021, he was editor-in-chief of the *Revue française de gestion*, published by Lavoisier. He directs, with professors A. Deville and D. Darpy, the collections "Les grands auteurs francophones" and "Lectures, relectures" published by EMS. Since 2014, he has initiated an "innovative audiovisual laboratory" project in collaboration with Xerfi Canal Productions, "IQSOG - Innovation through valuation" which has resulted in the broadcasting of more than 800 research interviews, distributed in video format via all streaming sites (Xerfi Canal, YouTube, Dailymotion, Orange Streaming, MSN...) and more recently also in the form of audio podcasts via the main platforms (Deezer, Spotify, Apple Podcast, Google Podcasts...).

Béatrice Durand

Alumni of the École Normale Supérieure (Paris). She has taught at several American and German universities (Brown, SUNY [Binghamton], Potsdam, TU Chemnitz, Halle, FU Berlin). Since 2004, she has been a professor at the Lycée Français de Berlin. She works in the fields of French and comparative literature, history of ideas and cultural studies. She has published *Diderot, Écrits sur la musique* (Éditions Lattès, 1987), *Le Paradoxe du bon maître. Essai sur l'autorité dans la fiction pédagogique des Lumières* (L'Harmattan, 1999); *Cousins par alliance. Les Allemands en notre miroir* (Autrement, 2002 [2017]); *La Nouvelle Idéologie française* (Stock, 2010); *Sauvages expérimentaux. A History of Fictions of Childhood Isolation* (Hermann, 2017).

Nadine Eck

Nadine Eck is a scientific collaborator of IRAFPA. She holds a Master's degree in history (University of Paris IV-Sorbonne) and a professional Master's degree in "Organisational Communication", specialising in "Audit and Communication Consulting" (I.S.I.C. / Bordeaux III). UE in social psychology of organisations (CNAM Grenoble). Scientific assistant at the GSEM (Geneva School of Economics and Management) at the University of Geneva, she developed an expertise on plagiarism texts and participated in the creation of the SGS anti-plagiarism label under the direction of Michelle Bergadaà. She acts as an expert at IRAFPA, for official delegations such as those of Kosovo and Montenegro in 2018 in the framework of the cooperation with the International Institute for Educational Planning (IIEP) of UNESCO.

Cinta Gallent Torres

Cinta Gallent Torres is an associate professor at the University of Valencia in Spain. She holds a PhD in Education and a double degree in French Translation and Interpretation. She was a teaching assistant and researcher in the Department of Modern and Classical Languages at the University of Connecticut (USA), where she obtained a Master's degree in Spanish. In 2005, she was named Outstanding Graduate Teaching Assistant by this university and, in 2018, she was named Mejor Profesor de España 2018 for the Educa Abanca Awards. Her areas of research include university teacher evaluation, student tutoring and mentoring strategies, cyberplagiarism and academic misconduct.

Catherine de Gourcuff

Catherine de Gourcuff est diplômée de l'Institut d'études politiques de Paris. Elle s'inscrit au barreau de Paris en 2003 et crée son cabinet en

2009, spécialisé en propriété intellectuelle et dans le marché de l'art. Elle fonde avec d'autres avocats spécialisés le réseau Aravocat en 2017. Elle est membre de l'association Art & Droit et de l'Institut international de recherche et d'action sur la fraude et le plagiat académiques (IRAFPA). Elle intervient régulièrement à l'école doctorale de la Sorbonne sur les aspects juridiques de la propriété intellectuelle.

Jacques Hallak

A French diplomat of Lebanese origin, Jacques Hallak worked for many years as Director of the IIEP (International Institute for Educational Planning) within UNESCO. In 1988, he was appointed Director of IIEP and Director of the IBE (International Bureau of Education) from 1998 to 2000. Today, he is an active contributor to the development of IIEP's programme on 'Ethics and corruption in education'.

Pierre Hoffmeyer

Pierre Hoffmeyer obtained his federal medical degree in 1976 in Geneva and trained in surgery at the Vancouver General Hospital, Canada. He was the head of the Department of Orthopaedic Surgery and Traumatology of the Motor Apparatus at the University Hospital of Geneva and became head of the hospital's Department of Surgery in 2007. On the academic level, he was appointed privat-docent in 1993, and full professor in 1998. In addition, he was president of the Swiss Orthopaedic Association and of the European Federation of National Societies of Orthopaedics and Traumatology (EFORT). He is also a member of the editorial board of several important journals and is editor-in-chief of the EFORT Open Reviews.

Marc Humbert

After a career as a teacher-researcher, mainly at Grenoble Ecole de Management (GEM) in the field of information systems, Marc Humbert is now a professor emeritus at the same school and intervenes part-time to teach data science and to set up projects in pedagogy and research. He is a graduate engineer from ENSIMAG and holds a PhD in computer science from Grenoble INP.

Caroline Hunt-Matthes

Caroline Hunt-Matthes is an assistant professor at the Grenoble Business School (GEM) in France and at Webster University in Geneva. Her research interests include whistleblowing, corporate social responsibility, academic integrity, diversity and inclusion. She is co-editor and author of *Whistleblowing and Retaliation in the United Nations* (Bristol University Press, 2021). She has championed the issue of safe reporting channels and adequate whistleblower protection as a foundation for good governance. She is also an international human rights investigator specialising in sexual violence. She served as a UN peacekeeper and investigator for 15 years in Rwanda and the former Yugoslavia.

Jovana Janinovic

Jovana Janinovic is a PhD student at Pavol Jozef Safarik University in Kosice (Slovakia) and at the University of Valladolid. Her main research interests are urban memory, post-socialist transition and heritage tourism. She graduated from the University of Montenegro and obtained a master's degree at EHESS in Paris and Charles University in Prague. Previously, she held positions as a researcher at the Graduate School in History and Sociology in Bielfeld and as a research intern at the Graduate School Global and Area Studies in Leipzig. She has been

involved in a number of projects related to research quality, academic integrity and the improvement of higher education.

Michel Kalika

Michel Kalika is professor emeritus at Jean Moulin University, IAE Lyon School of Management. He is the director of the BSIS (Business School Impact System) methodology that he developed for the FNEGE and the EFMD. He is also the President of the Business Science Institute (international DBA programme) and was previously Dean of the EM Strasbourg Business School. Michel Kalika is the author or co-author of more than 25 books, including *Management Stratégique* (Vuibert, 1998), the most reprinted French work in this field, and of about a hundred other publications in strategy and IT. His research focuses on the use of e-mail by managers ("millefeuille" theory) and on the impact of management schools.

Xavier Lambin

Xavier Lambin is an engineer from the Ecole Polytechnique (Paris) and the Ecole des Mines. After two years of strategy consulting, he completed a PhD in industrial economics at the Toulouse School of Economics in collaboration with ENGIE in 2019. He joined Grenoble Ecole de Management (GEM) the same year as an assistant professor. His research focuses on digital economics, artificial intelligence and market architecture. The techniques used are both theoretical and empirical.

Dominique Leglu

Dominique Leglu is the editorial director of the science division (Sciences et avenir; La Recherche) of the Challenges group. Her combined training as a doctor in nuclear and particle physics (Collège de

France, 1978), the Centre de formation des journalistes (Paris, 1980) and her DESS (post-graduate diploma) in "arms control" (University of Paris Est, 2002) predispose her to occupy a central position in the popularisation of science. She was deputy editor-in-chief of *Libération* (1998-2000), creator of the supplement *Eureka* (1992-2000), co-author of the magazine *Archimède* (Arte, 1992). She is a member of the editorial committee of *Bouquins* (Robert Laffont). She is also the author or co-author of five books, including *Les dossiers noirs du nucléaire français*, with M. and R. Senne (Presses de la Cité, 2013). Dominique Leglu has approached integrity from the angle of the imperative of accountability of elites, whether they are scientists or politicians.

Hervé Maisonneuve

Hervé Maisonneuve is a public health physician. He worked for 15 years in the pharmaceutical industry to develop clinical research programmes and for 20 years in evaluation agencies or as an associate professor of public health (Paris). He has been a member of editorial boards of scientific journals and has chaired the European Association of Science Editors. Since the late 1990s, he has been involved in activities promoting scientific integrity in France. He is the manager of a scientific consulting and training company (H2MW) and editor of a highly regarded blog: www.redactionmedicale.fr.

Sonya Morales

Sonya Morales holds a doctorate in law from Laval University (Quebec), specialising in intellectual property. A lawyer by training, she has given numerous lectures in academic and professional circles throughout the world. She has published several scientific articles, in particular on biotechnologies and the patentability of plant life. Sonya Morales taught at the Faculty of Law for more than 10 years before

accepting the position of manager of the Copyright Office at Laval University. The Copyright Office offers training on plagiarism and academic integrity and is developing expertise on research data, artificial intelligence, software and open access.

Jorge Onrubia Pintado

Historian and archaeologist, Jorge Onrubia Pintado is a full professor at the University of Castilla-La Mancha (Spain) where he directs the Laboratory of Archaeology, Heritage and Emerging Technologies, attached to the Institute of Regional Development. A specialist in the Canary Islands and the western Maghreb, his current research interests include landscapes and built spaces, the dynamics of colonisation and acculturation, ethnoarchaeology and the theory of material culture, and finally, "public" archaeology and the presentation of archaeological sites as heritage. Between 2006 and 2010, he was a member of the board of the University Quality Agency of the Castilla-La Mancha region.

Sanja Pekovic

Sanja Pekovic holds a PhD in economics from the University of Paris Est. She is an associate professor at the University of Montenegro (UoM). Since December 2020, she is Vice-Rector for Internationalisation at UoM. Her research interests include quality and environmental economics, economics of innovation, applied econometrics, academic integrity and on this topic she has presented studies at national and international scientific conferences, which have been published in international journals. She has also been vice-chair/chair of several conference organising committees, has been a referee for several prestigious academic journals and is an active member of several academic networks and societies. She is involved in several projects funded by national and international organisations.

Paulo Peixoto

Paulo Peixoto is a sociologist, associate professor at the University of Coimbra (UC) and researcher at the Centre for Social Studies. Member of the IRAFPA board, Paulo Peixoto chairs the board of the Portuguese Association of Sociology, conducts research and publishes on academic fraud and plagiarism. He acts as an ombudsman for students at the UC. He is a member of several research groups in Brazil, where he was a visiting professor at UERJ. He was president of the National Union of Higher Education. As part of his professional activity, he develops training actions on academic integrity, intervening as a mediator in conflicts.

Martine Peters

Martine Peters is a full professor at the Université du Québec en Outaouais in the Department of Educational Sciences. Her areas of specialization are the didactics of French and technopedagogy. Her research focuses on digital authoring strategies used in the writing of academic papers at all levels of education, on academic integrity and plagiarism. The integration of technology in the language classroom and the techno-pedagogical skills of future teachers are also part of her research interests.

Marian Popescu

Marian Popescu is an associate professor at the University of Bucharest, founder and director of CARFIA (Centre of Action, Resources, Training for Academic Integrity) at the University of Bucharest, member of the IRAFPA board. He is supervisor of doctoral theses (performing arts-theatre field) at Babeş-Bolyai University in Cluj-Napoca. Writer, theatre critic, expert in performing arts, communication, censorship, cultural policies, translator from English and editor. Author

of seven books on performing arts, he has developed a special interest in the field of academic integrity. He is a guest expert for the European Commission on cultural cooperation projects, literary translations and performing arts.

Jacques Py

Jacques Py is a professor of social psychology at the University of Toulouse. His research interests include eyewitness psychology, knowledge of social norms, human resources (professional training, recruitment). He has been interested in ethics and deontology for 25 years. This interest has led to an investment in learned societies (in particular the French Society of Psychology, a learned society of French psychology since 1901, which he chaired and of which he was vice-president in charge of ethics and deontology). He has also been a referent for scientific integrity at his university and currently chairs the Research Ethics Committee of the Federal University of Toulouse. He is also Chief editor of the *European Review of Applied Psychology* (published by Elsevier).

Jean-Baptiste Soufron

Jean-Baptiste Soufron is a partner at the FWPA law firm in Paris. He is also a lecturer at Sciences-Po Paris. Involved in many associative and activist activities, he was the first legal director of the Wikimedia Foundation (2006) as well as the secretary general of the Conseil national du numérique (2012-2015). He is also founder and member of the Board of Directors of the website Nonfiction, as well as member of the Board of Directors of the association Bibliothèques sans frontières. He intervenes in many fields such as the defence of digital rights, digital liberties, public liberties in general, criminal business law and the fight against corruption.

Marie-Avril Roux Steinkühler

Marie-Avril Roux is a specialist in copyright, intellectual property and new technologies. She is a member of the Paris and Berlin bars and the founder of the first Franco-German intellectual property firm MARS-IP. A convinced European lawyer, she has a passion for the defence of creations and inventions and for their development in their alternative, collaborative forms and for new technologies. She likes to think with her clients and to accompany their projects, whether they are creators, inventors, researchers, or whether they are companies in publishing, finance, food, production, NGOs or start-ups. She is a graduate of Sciences-Po Paris, of the University of Paris Panthéon Assas and recently of the Humboldt University in Berlin as part of an LL.M in German law.

Christoph Stückelberger

Christoph Stückelberger is President of the Globethics.net Foundation, the Geneva Agape Foundation, the Oikosinvest Foundation and the Asghar Foundation, all based in Geneva. Professor of Ethics at the University of Basel (emeritus), visiting professor of ethics at the universities of Leeds, Moscow, Enugu and Beijing. He was for a long time director of the development organisation Bread for All in the Swiss advisory commissions on international development and bioethics. He is a member of the boards of ethics funds. He has published widely on business ethics, financial ethics, development and the environment.

Susana Teixeira Magalhães

Susana Teixeira Magalhães is Head of the Unit for Responsible Conduct of Research at the Instituto de Investigação e Inovação em Saúde - i3S (Universidade do Porto), PhD in Bioethics from the Portuguese Catholic University with a thesis titled *Bioética e Literatura:*

entre a Imaginação e a Responsabilidade (If-Press, 2016) and a researcher in the fields of narrative medicine and research ethics. She has written several articles on bioethics and narrative medicine and coordinated, together with Paula Silva (FMUP, IPATIMUP-i3S), a study and reflection group on narrative medicine (Grupo de Estudos e Reflexão em Medicina Narrativa -- GERMEN).

Isabel Tello Fons

Isabel Tello Fons studied translation and interpreting at the University of Jaume I (Castelló de la Plana, Spain) and the University of Valencia (Valencia, Spain). She obtained her European doctorate in translation and interpreting from the University of Jaume I. She has been a freelance translator and teacher of translation for over fifteen years in higher education institutions. Her working languages are English, French and Spanish. Her main areas of research range from translation of linguistic variation and translation didactics to cyberplagiarism and academic integrity. She has published articles and presented papers at national and international conferences in these areas.

Dijana Vuckovic

Employed for 15 years by the University of Montenegro as a teacher and researcher. Her areas of teaching and research include: general teaching methodology, methodology of teaching mother tongue and literature, teaching reading and writing, reception of literature by children and youth, literacy and key competences, teaching methods, learning strategies, curriculum development, academic integrity, etc. She is a certified Montessori educator, author and trainer of several in-service teacher training programmes. She has participated in several projects supported by the Council of Europe and/or the European Commission.

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Michelle Bergadaà is Professor Emeritus at the University of Geneva. After her MBA, she obtained a PhD from the joint programme of the Universities of Montreal. She published more than 150 articles in her field before focusing on integrity sciences. In 2016 she founded the Institute of Research and Action on Fraud and Plagiarism in Academia (IRAFPA), a forum for international, interdisciplinary scientific discussion on fraud and plagiarism.

Paulo Peixoto is a sociologist, associate professor at the University of Coimbra (UC) and researcher at the Centre for Social Studies. Member of the IRAFPA board, Paulo Peixoto chairs the board of the Portuguese Association of Sociology, conducts research and publishes on academic fraud and plagiarism.