TOWARDS AN ECOLOGY OF CHINA'S LEGAL SYSTEM

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Abstract: China's legal system has undergone remarkable development over the past thirty years. Legal institutions now regulate every extant area of market activity, extending governance throughout every corner of China's market economy. However, national rules and regulations will be unable to stimulate corporations to act with integrity in the absence of compelling incentives that encourage compliance. The provision of compliance incentives is an enormous problem; laws must change so that they keep pace with their business environment, but firms are slow to adopt new laws due to their cost. Thus, the incentives of new laws may appear worse in comparison with the incentives of older laws, which would have a negative effect on compliance. In order to compare incentives, we utilize legal ecology, a research methodology that examines changes to the legal system over time. We propose that organizations, which use the law, are a key actor in determining the survival of a new law. If the incentives of a new law are unclear to the users of the laws, then, from the organization's perspective, the cost of using the new law is higher than the cost of using the old law. A new law will survive if the incentives are clear, which leads to lower costs for the organizations that use the law.

Keywords: organizational ecology, compliance, incentives, use of law

Introduction

Organization theorists are increasingly extending ecological dynamics, defined as processes of competition and legitimation, among populations of physical and social entities (Hannan & Freeman, 1977, 1984) into new theoretical domains. Ecological theory has been applied to the evolution of work routines (Miner, 1991), social networks (Jaffee, McEvily, & Tortoriello, 2008), and formal rules (March, Schulz, & Zhou, 2000). Recently, this tradition birthed the ecology of law, the study of evolutionary dynamics affecting the development of written national rules (van Witteloostuijn, 2003; van Witteloostuijn & de Jong, 2007, 2008, 2009).

Legal ecology proposes that the legal system's internal evolutionary dynamics, defined as law-making and law-abolishing processes, account for the introduction of and changes to statutes (van Witteloostuijn, 2003). External agents and environmental dynamics provide crucial triggers of these processes, but are not solely responsible for observed patterns of legal change. In a similar vein, the ecology of rules (Zhou, 1993; Beck & Keiser, 2003) explains variation in the volume of rule births as a function of change in the rule environment (Schulz, 1998b). In contrast, the ecology of law examines the effect of a legal domain's alignment with its environment on the volume of law births within a given population of statutes. Therefore, this article contributes to the ecology of law, and to ecological approaches overall, by examining the conditions under which the law birth rate is positive. The question is whether new laws are born when the legal domain is misaligned with its environment.

Systematically exploring this question requires a legal field (Edelman, 1997) characterized by a rapidly changing business and legal environment. The legal system of the People's Republic of China (P.R.C.) is identified as a suitable research field due to the extent and complexity of legal change within this system (Clarke, 2008). Given China's transition from a socialist to a market economy, substantive legal concepts, such as private property rights and the legal mechanisms used to protect them, are novel, providing an ideal case. Within China's legal system, the domain of bankruptcy, an integral legal institution for a market economy that does not have a legal presence within a socialist economy, is selected.[1]

The examination of bankruptcy reveals if the incentives of a new law are unclear, then the cost of using the law is high, due to the resource investment needed to understand and apply the law. Consider not only the financial cost to the organization, which stems from hiring attorneys to analyze the new law, but also the resource cost generated by the construction of new internal routines to bring the organization into compliance with the law. If the laws incentives are unclear, the organization will be wary of using the law due to these costs. Thus, ambiguity distorts incentives; a high degree of ambiguity will cause a law to rapidly fail. Moreover, a lack of clarity, in terms of incentives, reveals that the legal domain is misaligned with the business environment. From the regulator's perspectives, the failure of the new laws will lead to the creation of further new laws, so that the legal systems misalignment with the business environment causes the birth rate of statues to increase.

This paper contributes to legal ecology through its consideration of organizations' use of law, as opposed to more standard examinations of lawmakers' demography (Wittelostuijn & de Jong, 2009). Non-ecological theories of legal change emphasize the impact of external agents, such as special interest groups and lobbyists, on rule makers (Friedman, 2002). By attributing change exclusively to agency, these theories overlook the effect of internal processes of change on a population of statutes. The use of legal ecology modifies this standard conception of agency and integrates environmental effects with the role of firms. Through this synthesis, we contribute to China management research, generating new insights in the relationship between the society of Chinese organizations and the Chinese legal system. Chinese organizations do not simply comply or ignore the law, but rather shape the evolution of the law through their actions.

The paper proceeds as follows. We will first explain in detail the theoretical logic. Next, we provide an overview of the evolution of bankruptcy law within China. Then, we formulate propositions of the effects of newness on laws grounded in this empirical example. Finally, we conclude with a discussion of our results and offer a reflection on opportunities for future research.

Theoretical Background

The Ecology of Law

In organization theory and sociology, insights from biological ecology have been translated and applied to the evolution of populations of social entities rather than the evolution of species (Hannan & Freeman, 1977, 1984). This research stream focuses on the drivers of the rates of the birth, change, and death for social entities population in specific terms such as concentration, density, and diversity. The implications of these combined vital rates reveals the effects of underlying processes of competition and legitimation on the macro structure of the population (van Witteloostuijn & Boone, 2006). This ecological logic has been applied in empirical studies of a wide variety of organizational populations, including industrial firms and interest groups.

As the ecological research tradition deepened, a series of quantitative studies in the 1990s and 2000s tried to estimate the determinants of rule making processes through an examination of the evolution of organizational rules (e.g., March, Schulz & Zhou 2000; Schulz, 1998, 2003). Quantitative work on rule making grapples with the underlying processes that determine the vital rates of rules over an extended period of time. A core premise of this work is that underlying causal processes manifest in observable regularities that drive the evolution of stocks of rules.

Building on this work into the evolution of organizational rules, legal ecology (van Wittelostuijn, 2003) conceptualized and began the study of the evolution of national rules. In line with other ecological theories (see Hannan & Freeman, 1977), legal ecology assumes that the histories of groups of written laws possess general statistical properties, implying that they develop in systematic ways (van Wittelostuijn & de Jong, 2007). This assumption is founded upon, and granted by, previous empirical studies conducted into rules processes occurring within organizations (Schulz, 1998, 2003; Marsh, Schulz & Zhou, 2000).

Concept 1 (evolution of laws): The evolution of a stock of laws within a specific legal domain occurs in a systematic manner.

Legal ecology examines the systemic development of written laws within a particular legal domain, such as bankruptcy or contract law. This research program has established that underlying processes influence the production of statutes while the effect of certain ecological conditions on these processes remains understudied.

Organizations and the Law

A unique characteristic of the law is that *organizations*' use of law helps to determine the structure and the rate of change of a legal domain. "Organizations provide an important terrain for…the structuration of legal environments," (Edelman & Suchman, 1997, p. 507). Organizations are able to exercise a degree of choice in their use of the law, as they adapt to their institutional environment (Heinsz & Delios, 2002), exercise 'non-market strategies' (Baron, 1995), and engage in political behaviours that shape their regulative environment (Hillman & Hitt, 1999). Due to the influence of organizations, understanding the conditions underlying their use of law will explain variation in the observed rate of change within a population of statutes.

Organizations are embedded within the law; their operations face annually increasing levels of litigation, regulation, and certification (Edelman & Suchman, 1997). Through this relationship the legal system acts as a constitutive environment for firms, providing both forums and templates for commercial organizations' interactions that delineate and empower classes of firms. This interaction is recursive, as enterprises' are able to use their legally structured activities to constrain the law's reach.

Written law is, by necessity, both ambiguous and incomplete, and demands explanation in order to become complete (Pistor & Xu, 2002; Eggleston, Posner et al., 2000). Conceptually, an individual law is complete *only* if it unambiguously specifies solutions to all potential harmful problems. Written law overcomes this issue through the provision of 'default gaps,' common in standardized legal documents, which refer to a lack of a common knowledge agreement of a term (Riles, 2008). Since the law is ambiguous and incomplete, only the use of law can fill in these gaps or provide solutions to harmful problems. An organization cannot specify a solution without applying that law to an issue. The ambiguity of law empowers the use of law; the use of law empowers organizations to structure the legal environment.

For example, the law of contracts may specify that in the event of a default, the breaching party must pay a fine, thus giving a solution to a problem. However, what constitutes a default is ambiguous; if an act of nature, such as a typhoon, destroys a factory, causing a party to default, paying a fine is a grievous economic harm. Organizations, through their use of law, such as filing for fines if a contract is breached, define what it means to default on a contract. This definition shapes the legal environment, so that all new statutes within the domain of contracts refer to the organizational definition of default.

> *Concept 2 (legal ambiguity): The ambiguity of written law empowers organizations to influence the rate of change within a legal population through organizational use of law.*

Nonetheless, the process of organizational response to the law remains understudied. It is difficult to specify the actions that constitute the process. Corporations, as actors, are neither wholly passive nor wholly strategic in their responses to institutional pressure emanating from the legal system (Oliver, 1991). Of course, all organizations are supposed to abide by the law, so that reflections on an organizations use of law initially appear oxymoronic. Rather, the incentives underlying the use of law denote various conditions whereby organizations use of law causes changes in the evolution of the law. Instead of attempting to specify how firms respond to the legal system, this article argues that under these conditions firms' use of law affects the rate of legal change.

Use Incentives

A company must devote resources to understanding and applying a specific law and to navigating the population of laws within a specific legal domain. A law must offer sufficient incentives to overcome these costs, or the firm will avoid using the law because the costs will outweigh the benefits. These *use incentives* are geared towards providing a firm with either a resource or with access to a resource as a result of using the specific law. When a use incentive is sufficiently attractive, an organization will use a law. For example, the Enterprise Bankruptcy Law (EBL) provides access to reorganization, in which the resource is the protected status of the firm. The EBL also provides for trustees, so that the resource is the trustee's help in achieving a less costly winding down of the firm (PRC Enterprise Bankruptcy Law, 2006). A firm has the option of not using the bankruptcy statute and of pursuing alternative legal / non-legal means of dissolution. The use incentives of the Enterprise Bankruptcy Law are geared towards attracting a firm towards bankruptcy, as having a trustee unwind your debts should lower the costs of dissolution.

> *Concept 3 (Use Incentives): Different types of use incentives create different conditions for organizations to use the law. Under certain conditions, organizations' use of law influences the rate of change in a legal domain.*

The circumstances under which a certain law is applied vary across industry types and situational characteristics and these different types of situations are associated with different types of use incentives. Moreover, different levels of legal ambiguity accompany the various types of use incentives. Certain firms, such as pharmaceutical companies and banks face a higher level of legal regulation than others and operate under a mandate of legal usage, the first use incentive type. If a company opts for reorganization (see Chapter VIII, The Enterprises Bankruptcy Law of P.R.C., 2007), it is subject to the provisions stipulated within this chapter, including the formation, approval, and performance of the reorganization plan.

However, mandating usage does not equate with mandating compliance. If a statute is composed of broad goals in ambiguous language, an unintended effect of that ambiguity is the ability of attorneys and firms to use that law as a resource to achieve their own goal (Edelman, 1992; Burk, 1988). Law firms may perceive benefit in a law even when their client does not and often use the law on behalf of their clients to attain an outcome beneficial to their client, even if the outcome seems to be antithetical to the law's purpose. Thus, the second use incentive type is (self) interest-seeking incentives.

In addition to mandatory and self-interest use of law incentives, a firm will employ the law when the perceived benefit outweighs the costs as certain laws are utilized for the protection that they provide from uncertainty and risk. The law of contracts stipulates how to resolve disputes arising from one party to the contract claiming that breach (McNeil, 1978). The parties to the contract could resolve this dispute without recourse to the legal system or they could voluntarily turn to the legal system to repair a breach of contract. The conditions for the use of law are presented in Table 1 below.

> *Concept 4 (Variation in Ambiguity within Use Incentives): The conditions under which organizations use of law influences the rate of change in the legal population are determined by the differing degrees of legal ambiguity within use incentives.*

Table 1. ***Incentives for the Use of Law***

Incentive Type	Mandatory	Interest Serving	Protectionist
Level of Ambiguity	Low – High	High	Low

The Hazard of Obsolescence

While the repeal of a law could signal its death in an analogous manner to organizational failure, laws are rarely repealed (van Wittelostuijn & de Jong, 2009) and remain on the books after their usefulness has faded. Therefore, we employ the obsolescence rate instead of the survival rate to determine the influence of novelty on a stock of laws (Schulz, 1998b). The rate of obsolescence indicates the increase or decline in the obsoleteness of a law over time. Obsolescence is defined as the state of disuse, or when a law, despite its presence on the books, is no longer utilized; if a law is not used, then the law is not followed, voiding the authority of that law over its domain (Taylor, 1990).

> *Concept 5 (hazard of obsolescence): Although an obsolete law still exists, its obsolescence is similar to organizational failure in that the law is non-operational.*

Once a firm is attracted to a specific law, its use of that rule leads to the birth of further rules. These new laws offer specific solutions, either adding a level of detail to ambiguous language or completing a default rule. The use incentives of the new rule are more compelling than that of the old rule as they offer a higher degree of completeness.

It is also possible that ambiguity would be perceived as a desirable attribute under the self-interest use incentive. In that situation, organizations' use of law would resolve the ambiguity in the manner described supra, and the effect of this use would be the generation of organization friendly laws, as described in Edelman's (1992) article on Equal Employment Law in the United States. As fewer and fewer firms follow the old rule, over time it becomes less effective, and eventually becomes obsolete. Thus, obsolescence will have a positive effect on the volume of law births within its legal domain, as the lack of use will prompt lawmakers to generate new laws to regulate a specific legal domain (Schulz, 1998b). We consider the effects of ambiguity on the obsolescence rate through an examination of the evolution of the Enterprise Bankruptcy Law in China.

The Evolution of the Enterprise Bankruptcy Law

The National People's Congress enacted the Law of the People's Republic of China (P.R.C.) on Enterprise Bankruptcy on 2 December 1986, which came into operation on 1 October 1986 and applied to State Owned Enterprises (SOE) (Enterprise Bankruptcy Law, 1986). A law, in the formal sense, refers to a collection of text with a specific structure that codifies a regulation for a specific topic (van Witteloostuijn & de Jong, 2008). In China, the National People's Congress and its standing committee are empowered to generate national laws. The State Council and governmental ministries, such as the ministry of commerce, are able to issue regulations that interpret and clarify laws passed by the National People's Congress. On 9 April 1991, the PRC Civil Procedure Law (CPL) was approved; Chapter XIX of the CPL applied to the bankruptcy of private enterprises, or non-SOEs.

These laws were quite short. The 1986 Chinese Bankruptcy Law (1986 CBL) ran to 43 articles, while Chapter XIX of the CPL ran to 8 articles (Booth, 2008). In contrast, Chapter 5 of the US Bankruptcy Code contains 61 articles, while the US Bankruptcy code as a whole contains 11 chapters (11 USC). Of course, the comparison is faulty, given the state of China's economic development in 1986. It does show that the language was both broad and ambiguous as it is impossible to detail important procedures effectively in only 43 articles. Examples of procedural error resulting from insufficient detail include Chapter XIX of the CPL inability to specify whether non-SOEs were subject to the provisions of the 1986 Law and the 1986 CBL failure to denote a priority order for creditors (Booth, 2008). To address this issue, the Supreme People's Court issued a number of opinions interpreting both laws. The 1991 Supreme People's Court Opinion attempted to clarify issues of precedence, such as whether workers' rights were given precedence over creditors' rights in bankruptcy (Booth, 2008). In 1992, the Supreme People's Court issued an Opinion on the Application of the PRC CPL law for Non-SOE enterprises. Furthermore, Article 189 of the PRC Company Law supplemented the provisions of the 1991 PRC CPL.

Despite this clarification, use of the law was low. From 1989 to 1993, the court accepted only 1,153 cases total, an average of 191 per year (Wang & Booth, 2002). It has been estimated that prior to 1996 over 8 million enterprises existed in China, and that close to a majority of these enterprises operated at a loss (Zhang & Booth, 2002). A national survey conducted in 1997 of 14, 923 SOE found that 40.5% were estimated to be losing money (Zhang & Booth, 2002). Dissatisfaction with the low effectiveness led to two outcomes. First, post 1994 the drafting of the new edition of bankruptcy laws began. Second, the State Council issued several Bankruptcy Policy Decrees. These decrees applied to select SOEs regardless of whether the 1986 Bankruptcy law applied (Booth, 2008). The decrees extended the reach of the 1986 law while simultaneously superseding the law; companies would file under the 1986 law but refer to the decrees in doing so.

These decrees were issued to facilitate debt restructuring through mergers and acquisitions and bankruptcy filings under the Capital Structure Optimization Program (CSOP) (Wang & Booth, 2002). For example, on 25 October 1994, the State Council issued a notice (1994 PRC Notice) that addressed problems involving the resettlement of workers of state owned industrial enterprises. The notice provided special treatment for the resettlement of workers, such that resettlement rights were given first priority when funds from the sale of assets, such as land use rights of the bankruptcy SOE, were distributed.

In 1996 and 1997, the former State Economy and Trade Commission, in conjunction with the People's Bank of China and the State Council, issued further supplementary notices (1996 Notice; 1997 Notice). The 1997 Notice clarified that the resettlement rights of workers would have priority over secured creditors. If the sale of the land use right were insufficient to settle the workers claims, non-secured and secured assets would be sold to insure that the workers claims were satisfied. If this sale were insufficient, the People's Government of the same level as the SOE would be responsible for bearing the costs (Booth, 2008).

Several administrative out of court restructuring efforts were pursued in addition to the Government's policy decrees. In September 1999, the 15th Party Congress issued the Decision of Several Significant Issues on the Reform and Development of State Owned Enterprises (1999 Decision) (Wang & Booth, 2002). The 1999 Decision included measures aiding the banks, allowing them to increase their bad debt write-offs, which would support the mergers and bankruptcies of medium and large SOEs. It included a measure that would convert the debt of SOEs into equity, thus converting the major creditors of the SOEs into shareholders (Yu & Gu, 2001). Finally, in 2002, the Supreme People's Court issued another interpretation of the old bankruptcy laws, which included some of the ideas developing in the law reform process (Wang & Booth, 2002).

In 2006, the PRC Enterprise Bankruptcy law harmonized the various insolvency processes in China and enacted a unified law that replaced the old patchwork of insolvency legislation (Kargman, 2007). Major innovations in the new law included the replacement of the liquidation committee as the overseer of the bankruptcy process with administrators. This change was meant to address a gap in control; the liquidation committee was formed 15 days after the court made the adjudication order and not when the firm declared bankruptcy (Article 47 of the 2002 Supreme People's Court Opinion). During this time period, management could abscond with assets. The Supreme Court issued rules on the administrator in April 2007 (2007 Supreme Court Provision) before the new law had taken effect.

In addition to rules on the administrator, the 2006 Enterprise Bankruptcy Law also addresses corporate reorganization, a topic that was technically permitted under the old law but never used (Booth, 2008). Under the new law, both debtors and creditors may apply for reorganization, meaning that a creditor may apply for the bankruptcy of a debtor, and vice versa (2006 PRC Enterprise Bankruptcy Law, Article 70). Only a few cases have been carried out under this law. Despite this low use rate, the Supreme People's Court has issued Provisions on the Application of the Law (2007), a Notice on Implementing the rules

(2007), and an Official Reply, or an Opinion, on how a creditor may apply for liquidation against a debtor whose whereabouts are unknown (2008).

There are a total of 19 laws passed on bankruptcy in China from 1986 to 2008, as noted in Table 3 below. Out of these 16 laws, only three, the Enterprise Bankruptcy Law of 1986, Chapter XIX in 1991, and the Enterprise Bankruptcy Law of 2006, introduced new concepts to the legal domain. The remaining laws clarified and superseded these original laws. From 1986 to 2005, nine clarifying laws were passed, with a high volume occurring from 1994 to 2004, when public rule makers were motivated by the non-use of the law to generate new rules. From 2006 to 2009, in addition to the new bankruptcy law, 4 laws were passed to clarify usage issues within the law (see Table 3, p. 31).

Table 2. ***Evolution of Bankruptcy within China's Legal System***

Year	Law Name	Law Type	Body	New Concept	Clarify Concepts	Ambiguous Language	Cases Filed
1986	Enterprise Bankruptcy Law	Act	NPC	1	0	1	0
1987							0
1988							0
1989							98
1990							32
1991	Chapter XIX of the Civil Procedure Law	Act	NPC	1	0	1	117
1991	Opinion on Questions Concerning PRC Insolvency Law	Opinion	SPC	0	1	0	428
1992	Application of the PRC Civil Litigation Law	Opinion	SPC	0	1	0	478
1993	Company Law	Law	NPC	1	1	1	1000
1994	Document 59, Proposal for Carrying Out SOE Bankruptcy Law in Some Cities	Notice	State Council	0	1	0	1500
1995							2500
1996	Certain issues on trial implementation	Notice	SETC	0	1	0	6000
1997	Notice Concerning Problems Encountered	Notice	State Council	0	1	0	5500
1998	0	0	0	0	0	0	5000
1999	Decision of Several Significant Issues	Decision	NPC	0	1	0	5000
2000	Insurance Law	Law	NPC	1	1	1	5000
2000	Effect of Contract by Bankruptcy Company	Reply	SPC	0	1	0	5000
2001	0	0	0	0	0	0	5000
2002	Some Issues concerning the Trial of Bankruptcy Cases	Provisions	SPC	0	1	1	5000
2003	Some Issues concerning the Trial of Bankruptcy Cases	Provisions	SPC	0	1	0	5000
2004	0	0	0	0	0	0	5000
2005	Commercial Bank Law	Law	NPC	0	1	0	5000
2006	Enterprise Bankruptcy Law	Law	NPC	1	0	1	5000
2007	Designating the Administrator	Provisions	SPC	0	1	1	5000
2007	Application of Law to Bankruptcy Cases	Provisions	SPC	0	1	1	5000
2007	Application of Law to Bankruptcy Cases	Notice	SPC	0	1	0	5000
2008	How to handle a case where the debtor whereabouts are unknown	Reply	SPC	0	1	0	5000

Analysis and Propositions

Organizations and Law Births

The number of organizations that use a law, or the use rate, helps to determine the volume of law births in that domain. This phenomenon evidences itself in the evolution of the Enterprise Bankruptcy Law of 1986. This law initially suffered from a low use rate due to the difficulty organizations encountered in its use. Only 1,153 firms filed for bankruptcy in the first eight years of the bankruptcy laws existence when over 15 million organizations existed during that time period. This low usage rate was directly responsible for the decrees and interpretations issued by the Government to encourage use of the Bankruptcy Law. The additional decrees and interpretations led to an expansion in written law. The low use rate exerts a positive influence on the volume of rule births, which has a corresponding positive influence on the hazard rate. This suggests the first proposition:

> Proposition 1a: *A low use rate of the law will increase the rate of law births.*
> Proposition 1b: *The use rate of the law will decrease the hazard of obsolescence.*

Ambiguity and Law Births

A law that introduces a new concept to its legal environment will always possess a high degree of legal ambiguity. In contrast, a rule that clarifies an introduced concept, despite being new, will possess a low degree of legal ambiguity, because its purpose is to clarify the original law. Ambiguity will have a negative influence on the number of firms using a law, with a corresponding positive influence on the hazard rate of obsolescence. The effect of legal ambiguity is the generation of new rules that clarify the law. For example, the 1986 EBL presented a new market institution, bankruptcy, to the legal and business environment of China, and suffered from a lack of declarative clarity in its procedures. The 1997 State Council Decree clarifying this law was unambiguous; it stated that the resettlement rights of the workers of the bankrupt SOE had first priority over the rights of other creditors. Both laws were new, but only the 1986 law introduced a new concept, leading to the generation of further laws. This relationship suggests the second proposition:

> Proposition 2a: *The presence of legal ambiguity within a legal domain will increase the volume of law births.*
> Proposition 2b: *The presence of legal ambiguity will increase the hazard of obsolescence.*

Discussion and Conclusion

The strength of legal ecology lies in the new insights it can generate into old problems. Many theorists have discussed legal change from a purely exogenous perspective, arguing for the actions of external agents. The ecology of law shows that internal processes are also responsible for legal change. When the organizational use of the law determines the hazard rate, the underlying properties of a system are made clear. In no way does the examination of the organization use of law discount the role of lawmakers, such as the People's Congress. As the supply of problems within a particular legal area increases, and outstrips the ability of extant laws to provide solutions to these problems, lawmakers will generate new laws to address these problems. Legal ecology provides a framework to understand why the supply of problems increases; within this framework, an examination of organizational use of law helps to determine the conditions affecting the volume of law births.

A discussion of the factors affecting the supply of law must also consider the demand side, which leads, in part, to organizations. Consider the cost to an organization of using a law. The initial deciphering and application of legal routines requires more resources, in terms of time, lawyers employed to examine the law, etc., then an older law. Moreover, an organization could be uncertain if its interpretation of law is actually applicable to a new law. Laws must offer incentives to overcome the cost of use, or risk failure at the outset.

Incentives explain why some populations of laws exhibit a higher propensity for change than others. When a new concept is introduced to the legal environment, the incentives in the law (that introduces this legal concept) are sometimes misaligned with the business environment. This leads to the generation of new laws, or to an increase in the volume of law births. These new laws strive to clarify the legal concepts. Clarification decreases ambiguity, which lower costs. As the legal domain becomes aligned with the business environment, ambiguity decreases, and the volume of law births decelerates.

The ramifications for China's legal system are twofold. First, in terms of the overall legal system, the volume and pace of legislation suggests that legal solutions to problems are proliferating. Whether those legal solutions are preferable to alternative means of dispute resolution is beyond the scope of the paper. Regarding the Enterprise Bankruptcy Law (2006), the low volume of regulation suggests that the risk of obsolescence for this law is low. The largest obstacle to its success is no longer legal, but rather institutional. Thousands of attorneys, judges, and accountants must be trained in the new law for it to be truly effective. In the absence of institutional support, continued legislation will be passed in order to regulate the winding down of corporations, which will have a positive effect on the obsolescence hazard for the 2006 law.

Future research into this topic should strive to provide quantitative evaluations of the growth rate of laws within a national domain. Previous articles in legal ecology and the ecology of rules have provided such quantitative assessment. In order to do so, a large data set should be compiled, which would also allow the generalizability of the findings to be determined. Main effects and interaction effects could be computed, which would allow not only greater inclusion of multi-level analysis, but also grant greater sophistication in the consideration of trigger events. In addition, the collection of data in alternative legal domains allows cross population dynamics to be addressed. During the evolution of Bankruptcy law, laws from other legal domains, such as the law of corporations or civil procedure, addressed bankruptcy proceedings. It might be that growth in the population of these legal domains is a reaction to the inter-pollination.

A final remark relates to the potential applicability of our work. We believe that the use of ecology to study the evolution of law offers a promising platform to consider normally vexing questions, such as how to consider the use of law and the manner in which organizations use the law.

Note

1. Populations of law are domain specific, varying from corporate and tax to education law, while organizational rules are often problem specific (Schulz, 1998a). A legal domain refers to a population of laws within a single practice area, such as bankruptcy or contract law.

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Appendix

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Proposal for Carrying Out State-Owned Enterprise Bankruptcy Law in Some Cities, Document no.59 (1994)
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Provisions of the Supreme People's Court on Designating the Administrator during the Trial of Enterprise Bankruptcy Cases (2007)
Provisions of the Supreme People's Court on Some Issues about the Application of Law for the Enterprise Bankruptcy Cases That Have not Been Concluded When the Enterprise Bankruptcy Law of the People's Republic of China Comes into Effect (2007)
Notice of the Supreme People's Court on Implementing the Rules on Some Issues concerning the Application of Law to Enterprise Bankruptcy Cases pending Trial upon the Effectiveness of the Enterprise Bankruptcy Law of the People's Republic of China (2007)
The Official Reply of the Supreme People's Court on How to Handle a Case Where a Creditor Applies for Bankruptcy Liquidation against a Debtor Whose Relevant Persons' Whereabouts are Unknown or Whose Asset Conditions are Unclear (2008)
The Opinion on Questions Concerning the PRC Enterprise Insolvency Law (1991)