

A Typology of Organizational Behavior: At the Crossroad of Risk and Uncertainty*

KANG JEONG-HAN | YONSEI UNIVERSITY
HAN SANG WON | KOREA UNIVERSITY

Four modes of organizational behavior are proposed by crossing two behavioral dimensions adopted from organizational ecology (inertia vs. change) and neoinstitutionalism (normative vs. deviant). Those four modes are innovative (deviant change), reformative (normative change), conservative (normative inertia), and reactionary (deviant inertia) modes in the life-cycle of organizational behavior. Also identified are two distributional characteristics underlying each behavioral dimension: low risk vs. high risk underlying inertia vs. change, and certainty vs. uncertainty underlying normative vs. deviant. Through the integration of inertia-conformity and risk-uncertainty dimensions, hypotheses are generated on how transition to the next mode can be either promoted or hindered by sociopolitical resources at the organizational level and by intervention of the state and the civil society at the societal level. The typology and hypotheses outlined in this paper aim to further theoretical articulation and empirical tests on the evolutionary dynamics of organizational forms and institutions in the market.

Keywords: *Inertia, Conformity, Risk, Uncertainty, Organizational Behavior, Institutions, Organizational Forms*

*We thank Edward O. Laumann for providing valuable comments and two anonymous reviewers of *Development and Society* for their constructive criticism. Direct correspondence to Kang Jeong-han, Department of Sociology, Yonsei University, 134 Sinchon-dong, Seodaemun-gu, Seoul 120-749, Republic of Korea (Phone: +82-2-2123-5421; Email: jhk55@yonsei.ac.kr)

Introduction

Population ecology and neoinstitutionalism lead organizational theories that incorporate organizational environments and view organizational dynamics at the macro-level. Organizations are either selected by their environments, according to population ecology (Hannan and Freeman, 1977), or adapted to institutional legitimacy, according to neoinstitutionalism (DiMaggio and Powell, 1983). Their emphasis on the interdependence between organizations and institutional environments identifies organizational form in population ecology or organizational field in neoinstitutionalism as the primary element in organizational evolution, but there has not been much research on how organizational forms or fields change (Meyer, Gaba, and Colwell, 2005). This lack of research concerning dynamism at the macro-level can be found in each theory.

First, population ecology is largely lacking in empirical research on population dynamics in spite of its theoretical interest in it. Carroll and Hannan (2000) theoretically articulated the concept of organizational “form,” but most empirical studies focus on the dynamics of individual organizations *within* a given industry, population, and form, which is likely in a stable, rather than in a dynamic environment. In a word, the dynamics of organizational form is understudied in the literature of population dynamics (Chiles, Meyer, and Hench, 2004; Singh, 2006: 179). Population ecology did not theorize the dynamic nature of environments as much as it did for organizational structures. According to population ecology, the environment of a particular form is the density of other forms, while those other forms need to be explained by their own environment. Political factors are hardly implemented in such environments (Ingram and Simons, 2000), and population ecology is not able to provide standard research guidelines for form-dynamics as much as it did for individual dynamics.¹ Organizational environments are theorized in terms of risk and uncertainty, and sociopolitical factors that can affect risk and uncertainty are explored in this paper.

Second, neoinstitutionalism theoretically tells a convincing story of how strong a dominant institution is, as captured by the image of institutional

¹ Without doubt, population ecology is correct in arguing that legitimacy is a crucial determinant for the success of a new organizational form (Hannan and Carroll, 1992; Ruef, 2000). However, the issue of legitimacy, which is essentially cognitive and symbolic, is much better theorized and studied in the literature of neoinstitutionalism.

“iron cage” (DiMaggio and Powell, 1983) which is named after Weber’s bureaucratic “iron cage” (Weber, 1970), but it does not provide a comparable story of how the self-enforcing cycle of an institution can be eventually broken (Greif and Laitin, 2004). Driving forces for institutional changes of each case are examined (Haveman, 2000). Empirically, neoinstitutionalism has been accumulating diverse, interesting case studies but their general hypotheses have hardly been tested. Explanations tend to be *ad-hoc*, depending on the cases, and neoinstitutionalism explains nothing when trying to explain everything (Haveman, 2000: 478). This paper provides four evolutionary stages of an institutionalized organizational behavior and infers how the state and civil society can generally affect transitions between stages. This paper is also in line with Simons and Ingram’s (2003: 613) recommendation that “organizational theorists reengage with theories of the state.”

In summary, research on organizational dynamics at the form-level has been viewed as a fundamental, theoretical, but certainly under-developed, topic (Chiles, Meyer, and Hench, 2004; Singh, 2006: 179), and the goal of this paper is to contribute to this topic by proposing a typology on evolutionary stages of an organizational form. It will become clear that the typology is built on integrating population ecology and neoinstitutionalism. Subsequently, this proposed typology is intended to apply to both organizational forms, which emerge and are sustained through selection processes, and organizational practices, which emerge and become isomorphic to institutional environments through adaptive processes. In this regard, this paper is in line with the “weak selection” perspective (Singh, 2006: 188-189), where selection and adaptation are complementary rather than competing forces in evolution (Ruef, 2004). This typology is applicable to any systematic organizational behavior that is either imprinted as organizational forms or routinized as normative practices in organizations. In this sense, the terms “behavior,” “form,” and “practice” can be commonly referred to as the object of this typology, “behavior.” Another reason for using the term “behavior” for this typology is because this typology borrows insights from organizational behavior theories which have been paying great attention to risk and uncertainty entailed in organizational behavior. This will be discussed later in detail after clarifying two key organizational behaviors observed by population ecology and neoinstitutionalism, i.e., inertia and conformity, respectively.

Confounding Concepts in Organizational Behavior and Decision-Making

Inertia and Conformity

In the field of contemporary organizational studies, two similar organizational behaviors have been studied under two different theories: inertia (*vs.* change) in population ecology (e.g., Hannan and Freeman, 1989; Miller and Chen, 1994) and conformity (*vs.* deviance) in neoinstitutionalism (e.g., Meyer and Rowan, 1977; Phillips and Zuckerman, 2001). Organizational inertia is acquired through a selection process in an organizational population (Hannan and Freeman, 1989: 67-77). It is analogous to biological inertia imprinted in an organic body, which hinders adaptation to environmental changes, resulting in the failure of adaptive survival and ultimately of evolving into a new population (Hannan and Freeman, 1977).

In comparison, conformity is an adaptive behavior in pursuit of legitimacy, which is often ritually settled (Meyer and Rowan, 1977) and achieves institutional isomorphism among different organizations (DiMaggio and Powell, 1983). In other words, conformity assumes certain social norms in an organizational field that presume most organizations in the field to observe (see Scott, 2008). Observing norms brings legitimacy, which is a key resource for organizational success. When an organizational form is examined, whether the form is an outcome of selection and inertia or that of adaptation and conformity actually depends considerably on the researcher's theoretical perspectives.

Figure 1 shows four possible combinations of organizational behavior derived from a cross-table of the two theoretical approaches under discussion here. As the cross-tabulation shows, both inertia and change can be either normative or deviant. However, inertia often associates with conformity and change with deviance both theoretically and empirically. Hannan and Freeman (1989), in their theoretical elaboration of why selection favors inertia, provide legitimacy pressure as an important cause for inertia (Hannan and Freeman, 1989: 67-77), which clearly implies that inertia theoretically intersects with conformity. In addition, some empirical studies often combine organizational ecology and neoinstitutionalism to explain organizational behavior at the intersection (e.g., Dobrev, 2005; Haveman, 1993; Lune and Martinez, 1999). Those intersecting behaviors will fall in the

		Population ecology	
		Inertia	Change
Neoinstitutionalism	Normative	(1)	(3)
	Deviant	(4)	(2)

Figure 1. Four Modes of Organizational Behavior.

shaded diagonal positions in Figure 1 (i.e., normative inertia or deviant change).

Then, how much attention have researchers been paying to the non-intersecting or off-diagonal positions such as deviant inertia and normative change? In fact, normative change has been a central research topic among neoinstitutionalistic studies: any study about institutionalization or about later adopters driven by legitimacy pressure, by definition, examines normative change (e.g., Davis and Greve, 1997; Haveman, 1993; Hirsch, 1986; Tolbert and Zucker, 1983). In comparison to normative change, deviant inertia has not been studied much. In fact, deviant inertia is the other side of normative change because inertia is deviant when change is a norm. Further elaboration will be made later on deviant inertia most likely being observed in a disappearing population or in the process of deinstitutionalization.

In sum, most forms of organizational behavior in Figure 1 have been actively studied but not theoretically clarified with respect to their differences, similarities, and relations. Inertia and conformity are often viewed indiscriminately. Provided below is a theoretical typology of four forms of organizational behavior derived from a combination of organizational ecology and neoinstitutionalism. In order to develop this typology, two concepts, risk and uncertainty, that are mutually related to organizational decision-making as much as inertia and conformity.

Risk and Uncertainty

Discussion on risk and uncertainty is restricted to the outcome distribution of goal-oriented behavior. The relation between risk and uncertainty is well noticed by Knight (1921) and best summarized by March and his colleagues from an organizational perspective: High-risk behavior implies high variance in the distribution of its outcome (March, 1988; March and Shapira, 1987) and, consequently, high probability of failure. Without

doubt, the level of risk entailed in one particular behavior is also affected by the mean of its outcome distribution as well as by its variance. However, if that behavior is risky because its expected outcome is close to failure, the behavior automatically has low probability of success, and there is no reason to take this type of risk in decision-making. Risks are worth taking only when the probability of success is reasonably high. Therefore, risks caused by the average expected outcome that is close to failures will be ignored in this study, and the focus will be limited to risks caused by the large variance of outcome distribution.

In comparison to high risk, high uncertainty implies unknown distribution of outcome (March and Simon, 1970: 93), i.e., the mean, variance, and other key parameters of an outcome distribution are not known. Therefore, the risk of a certain behavior under high uncertainty cannot be properly assessed because variance of distribution cannot be calculated if the distribution itself is not known. While risk-taking is a rational behavior given correct information on alternative outcomes, uncertainty or incorrect information enforces a “search” for “satisficing” rather than optimal behavior (March and Simon, 1970: 93-102).

In sum, certainty is a prerequisite to the choice between risk-taking and risk-averse behavior. Discussing behavioral risk under uncertainty does not make sense. But, if the scope of uncertainty is limited to an unknown mean of an outcome in combination with its known variance, different levels of risks are conceivable under uncertainty. Under this limited scope of uncertainty, a decision-maker knows that the outcome of a risk-averse behavior will be close to the mean outcome regardless of whether the mean outcome is close to success or failure. In sum, there are four possible combinations of behavior with different levels of risk under different levels of uncertainty as can be seen in Figure 2.

Like in Figure 1, the two diagonally shaded combinations in Figure 2 are likely to be viewed indiscriminately. For example, do entrepreneurs bet on uncertainty or take risks? They do not take risks but essentially bet on

(1)	(3)	Low	Uncertainty
(4)	(2)	High	
Low	High		
Risk			

Figure 2. Four Conditions in Decision-Making.

uncertainty, according to a classic specification by Knight (1921). Entrepreneurs explore unknown territories. In comparison, contemporary venture capitalists, who are often considered to be exploring uncertain territories, actually avoid uncertainty and take risks at best (Zider, 1998). It may be summarized that venture investments have evolved from taking uncertain entrepreneurial behavior to risk-taking financial strategies.

Then, what about off-diagonal forms, risk-aversion under highly uncertain mean outcome, and risk-taking under low uncertainty? In fact, risk-taking under low uncertainty should be expected in rational decision-making but is actually hindered by human tendency for loss aversion, the implications of which have been actively studied (Benartzi and Thaler, 1995; Gneezy and Potters, 1997; Thaler et al., 1997). By contrast, we know little about risk-aversion under high uncertainty. As deviant inertia is less observed and understood than normative change, risk-aversion under high uncertainty is paid much less attention than risk-taking under low uncertainty. Is there any link between deviant inertia and risk-aversion under high uncertainty? The typology of organizational behavior hypothesized in this paper provides an answer to this question. Before viewing this typology, a mathematical expression of risk and uncertainty is briefly introduced.

A Mathematical Formalization of Risk and Uncertainty

Mathematical definitions of risk and uncertainty are specified here because this paper aims to provide not only a rigorous, but also a practical, typology which can guide empirical research. For this mathematical formalization, assume the outcome of an organizational behavior as a random variable X with its distribution function f . For convenience, it can be further assumed that larger values of X represent more successful outcomes. Then, $E(X)$, or the expected value of X , measures how successful the behavior is on average. However, $E(X)$ does not reveal anything about the variability of the outcome. Does the behavior yield consistent outcome around $E(X)$ or show oscillating patterns between large successes and large failures? $Var(X)$, or the variance of X , captures how much the outcome distribution spreads (Ross, 2002). In this way, the very concept of the variance is associated with the level of risk. In finance, variance or a rooted variance (i.e., standard deviation) is used to represent the risk associated with a given security or the risk of a portfolio of securities (Ross, Westerfield, and Jaffe, 2005: 261-265). The basic idea is that the variance is a measure of risk or volatility associated with the outcome of a strategic choice. And this idea can be extended to

performance-related outcomes of any organizational forms, routines, and practices. That is, the more a form's outcomes vary from the average outcome, the more risky and volatile an organizational form.

In general, the operational concept of risk requires 'true' and 'unchangeable or at least robust' objective distribution, say, $N(\mu, \sigma^2)$ where $\mu = E(X)$ and $\sigma^2 = \text{Var}(X)$ ². In other words, firms know the distribution that yields outcomes (Alvarez and Parker, 2009). Unlike risk, firms may be unable to assign probabilities under uncertainty and also be unable to assess the full range of possible outcomes. When a firm's environment is uncertain, few decisions yield fully predictable outcome (Lieberman and Asaba, 2006). In a statistical manner, firms are not certain about $\mu = E(X)$ and $\sigma^2 = \text{Var}(X)$, let alone its distribution function f . Even in case of a limited scope of uncertainty, as shown above, firms are often ignorant of possible future outcome (Shackle, 1972; 1979). Under this situation, firms will try to estimate the expected outcome μ with data $x = (x_1, x_2, \dots, x_n)$ available to them. The best-known estimate of μ , for example, is $\bar{X} = \sum_{i=1}^n (x_i/n)$, where the variance of the sample mean $\text{Var}(\bar{X})$ is given by σ^2/n by the central limit theorem (CLT) (Casella and Berger, 2002: 236-238). The CLT, in crude terms, states that the sum of a large number of independent and identical random variables has normal distribution, whose mean has the decreasing variance as the sample size increases. This decreasing variance with a larger sample size implies decreasing uncertainty and more information. Generally denoting an estimate of μ by $\hat{\mu}$, this example of \bar{X} is when $\hat{\mu} = \bar{X}$, and thus, $\text{Var}(\hat{\mu}) = \text{Var}(\bar{X})$. The level of uncertainty can be generally formulated by $\text{Var}(\hat{\mu})$.

In summary, when an outcome X of organizational behavior is a random variable with $E(X) = \mu$, the risk of the behavior is $\text{Var}(X)$ while its uncertainty is $\text{Var}(\hat{\mu})$.

Suppose that this mathematical definition is applied to estimating the effect of having a research and development (R&D) department on a firm's revenue. In this case, organizational behavior of interest is having a R&D department, and its outcome X is the firm's revenue. Collecting revenue statistics $x = (x_1, x_2, \dots, x_n)$ for firms with a R&D department and estimating its variance $\sigma^2 = \text{Var}(X)$ will yield the degree of risk involved in those firms having a R&D department.

At the same time, calculating its mean $\bar{X} = \sum_{i=1}^n (x_i/n)$ shows the average

² Normal distribution is assumed for the sake of expositional clarity.

revenue of the surveyed firms with an R&D department. By comparing this mean to the mean revenue of comparable firms without an R&D department, an answer can be provided as to whether having an R&D department at a firm improves revenue or not. Suppose that there are other studies that could explain how an R&D department improves a firm's revenue. If those studies, including this one, do not show agreement but yield contradictory findings, this implies a high variance in the estimated effect of R&D, or high value on $Var(\bar{X})$. This means high uncertainty involved in having an R&D department. Alternatively, suppose that senior managers in various firms are surveyed and asked if they think R&D improves a firm's revenue. If their answers do not agree but reveal high variability, it can be inferred that an R&D department as an organizational form or practice entails high uncertainty.

For example, academic studies on total quality management (TQM) did not show consistent findings on performance (Powell, 1995). TQM advocates claim that TQM is widely acknowledged to be one of the most important organizational innovations in that it enhances the quality of products and services, reduces costs, and satisfies both customers and employees, leading to improved organizational effectiveness (Easton and Jarrell, 1998; Hackman and Wageman, 1995; Walton, 1986). On the contrary, its opponents suggest that a considerable number of firms tried to implement TQM, but actual performance increase did not materialize (Schaffer and Thompson, 1992). Inferring from divergent research results between these two lines of research, risk-uncertainty function for TQM adoption can be specified. For instance, the relationship between the decline in TQM's popularity measured by the yearly counts of TQM articles and inconclusive evidence for its effectiveness can be interpreted in terms of high uncertainty involved in adopting TQM practices (Jung, 2008). On the other hand, risk mitigation of TQM practices for a given firm is undertaken by allowing trial-and-error for customizing quality practices to the unique problems and opportunities faced by that particular organization, which leads to lower levels of risk or, namely, smaller values for $\sigma^2 = Var(X)$ (Westphal, Gulati, and Shortell, 1997).

Typology: Conservative, Innovative, Reformative, and Reactionary Behavior

Four modes of organizational behavior are proposed by overlapping two tabulations: inertia-conformity tabulation (i.e., Figure 1) and risk-uncertainty tabulation (Figure 2). This overlap is based on (1) match between normative

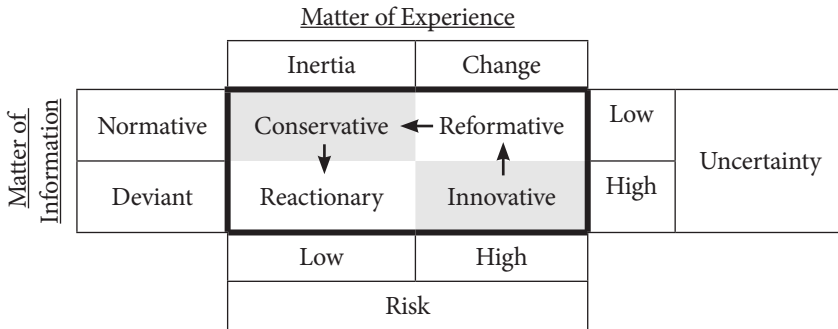


Figure 3. A Typology of Organizational Behavior.

versus deviant behavior and low versus high uncertainty, and (2) match between inertia versus change and low versus high risk.

First, by definition, normative behavior implies statistically modal (i.e., frequent) behavior because norms are observed or followed by the majority of society. Therefore, the outcome distribution of a normative behavior is much better known than that of deviant behavior due to its larger number of observations, regardless of large or small variance in the distribution. By contrast, there are fewer cases of deviant behavior, with unknown possible outcomes or the likelihood of respective outcomes. Therefore, deviant behavior is characterized by uncertainty. It is, in other words, a matter concerning outcomes and their likelihoods of a specific behavior. There is high uncertainty in deviant behavior (i.e., lack of information on the behavior) while reduced levels of uncertainty is implied in normative behavior (i.e., more information on the outcome distributions).

Second, inertia *vs.* change corresponds to low *vs.* high risk. Doing what has been done repeatedly (inertia) increases “accountability” of processes and “reliability” of an outcome (Hannan and Freeman, 1989: 72-73). Reliability means low variance by definition: inertia guarantees smaller variance in outcome or lower levels of risk than does change. In addition, accountability of inertia means that the decision-maker has a better sense of why a specific behavior results in a specific outcome in repeated trials.³ This accountability, in combination with reliability, requires that “organizational structures be highly reproducible” (Hannan and Freeman, 1989: 75). Inertia fine-tunes organizational forms and routines through the cycle of variation-selection-retention (Miner, 1994). In summary, inertia *vs.* change is a matter of

³ Such an account does not necessarily reveal a true causal relationship.

experience, whereas normative *vs.* deviant behavior is a matter of information. Becoming inert implies increased reliability and accountability, whereas becoming normative implies reduced uncertainty.

Informed by these matches between conformity and certainty and between inertia and low risk, we can name four forms of organizational behavior in the market. First, when an organization changes its behavior to follow others' popular behavior, it cannot predict its own outcome if the organization has never experienced it before or it's been too long since the event. This behavior represents normative change or "*reformative*" behavior in Figure 3. It is reformative because it tries something new but is not truly innovative because it follows known paths whose outcome is reasonably predictable with minor variances. Deviant change can be truly called "*innovative*" behavior whose outcome is, with few precedents, truly unknown. At the diagonal opposite to innovative behavior, normative inertia, or "*conservative*" behavior, represents constant agreement with the majority, whose outcome becomes most certain with least variability through repeated trials. Deviant inertia, or "*reactionary*" behavior, is positioned at diagonal opposite to reformative behavior.

In order to understand reactionary behavior better, imagine an example of market value of a product as an outcome of the product market. In addition, suppose that many producers are leaving the market because the market is no longer seen as lucrative. A producer sticking to its production is now uncertain of a new expected market value of his/her product due to increased environmental uncertainty (e.g., scarcer but less popular product now). Its realized market value, however, will be close to the new average value, whatever the average value is, because the firm has been routinely producing a reliable product with quality. In this sense, the producer is risk-averse and involuntarily taking uncertain risks on a new expected market value for the product.

Deviant inertia is reactionary because behavior adheres to an ongoing trend or repeated pattern when most others choose to change. Inertia is no longer normative, but rather, change is a norm. Such a normative change is reformative in our typology. In sum, when one behavior is reactionary and de-institutionalized, it necessitates the emergence of another behavior as reformative and institutionalized. A once-dominant organizational form or strategy is replaced by another.

The Dynamics of Organizational Forms and Institutions

In this paper, four modes of organizational behavior are proposed based on integrating organizational ecology and neoinstitutionalism. The major driving motivation of the typology is, as stated earlier in this paper, the guiding macro-level research on organizational dynamics based on integrating two leading sociological organization theories. In other words, typology is designed to apply to both the evolution of organizational forms, which has been the major theoretical topic without “successful” empirical results in organizational ecology, and the rise and fall of organizational practices and institutions resulting in the accumulation of diverse empirical case studies without testable hypotheses in neoinstitutionalism. Broadly speaking, the goal of this paper is to propose four dynamic stages of organizational behavior without regard to whether those behaviors are identified as organizational forms or institutionalized practices.

A form or practice starts as an innovative behavior. Once the innovative behavior is regarded as successful, its uncertainty is lowered, and the behavior is diffused to and implanted in other organizations. The behavior is now at its reformative stage. When the implantation is finely tuned and routinized by repeated trials to obtain a reliable outcome, the behavior is established as a conservative organizational form. If the form’s effectiveness declines due to increased environmental uncertainty, the form will remain or die as reactionary inertia. The birth of an organizational form as an innovative behavior, its growth to a reformative stage, mature peak at a conservative stage, and final decline to a reactionary status resembles a lifecycle of a biological individual. In Figure 3, the lifecycle starts at *innovative*, rotates counterclockwise to *reformative* and then to *conservative*, and finally ends at *reactionary* stage.

Various studies in organizational literature then can be classified according to typology, and holes can be found in the literature. For example, studies on founding and disbanding rates within a given population seem to be limited to the equilibrium or conservative stage of a population. Those studies examine the dynamics of individual organizations and not the dynamics of populations. This is contrary to Hannan and Freeman’s early ambition for population dynamics (see Hannan and Freeman, 1989: preface). The determinants of founding and disbanding rates at earlier or later stages may be worth examining. More importantly, more research should be conducted on transition from one stage to the next stage and evolution from

one form to another at the macro-level. Recent efforts to examine inter-form relationships are notable in this regard (Ingram and Simons, 2000; Schneiberg, 2007).

If research on organizational ecology tends to be concentrated on the conservative stage of an organizational form, then institutional studies on diffusion will most likely be limited to the reformative stage when legitimacy pressure is at its peak. It is important to know why some innovations fail while others settle as institutions (Abrahamson, 1991) and how institutions finally lose their legitimacy and fall into the reactionary stage (Davis, Diekmann, and Tinsley, 1994). The next step is generating research propositions concerning those transition mechanisms from one mode of form or institution to the next mode in this typology.

Market Conditions and Transitions

What kinds of organizations drive transitions of organizational forms and practices can be inferred by reviewing various organizational theories. In Figure 3, transition from the innovative stage to the reformative stage is enabled by the reduction of uncertainty or gathering of information. Network scholars have shown that social relationships evolving from transactions play significant roles in reducing uncertainty in the pursuit of profits (Podolny, 2001; Sorenson and Stuart, 2001; Uzzi, 1996, 1997). At the same time, institutional economists observe that the most important function of institutions in a market system is reduction of uncertainty in the exchange (North, 1991a) or transaction cost (Williamson, 1981). Organizational scholars from neoinstitutionalism further argue that the process of being institutionalized is the process of gaining legitimacy (Meyer and Rowan, 1977), which is enabled by political efforts of institutional entrepreneurs (Haveman and Rao, 1997) and social activists' efforts to build the social identity of an innovation (Carroll and Swaminathan, 2000; Greve, Pozner, and Rao, 2006; Rao, Monin, and Durand, 2003). Generally speaking, reducing uncertainty and gaining legitimacy requires sociopolitical efforts by organizations with rich social capital that can assess the outcome of an innovation without much cost and by organizations with rich political capital that can influence others to adopt the same innovation and actively institutionalize the innovation as a legitimate practice.

If a transition to the reformative stage is mainly driven by sociopolitical efforts of institutionalization, the next transition to the conservative stage will be mainly driven by market competition. This is because reducing risks by

reliable and accountable production is achieved by a selection mechanism under competitive pressure (Hannan and Freeman, 1989). A form or practice will be fine-tuned through repeated cycles of variation-selection-retention in pursuit of optimal production (Miner, 1994) and may arrive at the fittest form during the conservative stage. In short, transition to the conservative stage is mainly driven by efficiency-driven organizations under high competitive pressure.

Transition to the reactionary stage, either by the demise of an organizational form or by deinstitutionalization, is studied less than other transitions. A few exceptional efforts (e.g., Ruef, 2004; Scott et al., 2000), however, suggest that both the external emergence of competing organizational forms and internal organizational decision-making affect the decline of organizational forms. Although more research and evidence need to be collected, it is roughly predicted that organizations with information disadvantage are less likely to detect increased environmental uncertainty, less likely to have resources for organizational changes, and eventually more likely to be inert while other organizations make reformative changes toward emerging, competitive strategies. Recalling social and political capitals as the source of information advantages, those reactionary organizations are likely lacking in political power and social networks necessary for information and influence due to information disadvantage. Summarizing sequential transitions from innovative to reformative, to conservative, and finally to reactionary stages, the first proposition is reached as follows.

Proposition 1: Transition to the reformative stage is mainly attributable to organizations with high political and social capitals which enable information advantages and legitimacy; transition to the conservative stage is attributable to organizations under high competitive pressure which accelerates selection processes; and finally, transition to the reactionary stage is attributable to organizations with low political and social capitals lacking information advantage and influence.

Larger Society and Transition

Due to the fact that the market is embedded in the larger society (Polanyi, 1944), societal factors that can affect the dynamics of organizational forms in the market must be taken into consideration, with particular focus on the state and the civil society that interact with the market. North (1981, 1991b) points out that the state shapes the actors' incentive structure in the

market by setting regulatory market institutions. This is one major way in which the state lowers market uncertainty. On the other hand, economic actors in the market pursue not only competitive advantages but also political rent as the source of economic revenue (Baumol, 1990). When the state establishes new rules of the game in the market and some innovative organizational forms actively respond to the new rules through political rent-seeking, market uncertainty will be lowered in favor of those organizational forms (Fligstein, 1990, 2002). In short, strong market interventions by the state help some organizational forms develop to the reformative stage by political rent-seeking.

While a strong state may help reduce market uncertainty in ways that favor certain organizational forms to develop to the reformative stage, it is likely to hinder transition to the following stage. When an organizational form survives mainly through political advantages, not by competitive advantages, it is unlikely to develop into a fine-tuned form that produces highly reliable outcomes. The form will survive anyhow without optimal productions with politically supported by the state. The state may have incentives to favor one organizational form over another. In short, a strong state weakens the selection processes in the market and allows the survival of less reliable forms.

Through similar means, a strong state may hinder transition from the conservative to the reactionary stage. When a state has a strong interest in keeping dominant organizations at the conservative stage, it will protect them from environmental shocks and uncertainty while discouraging the emergence of alternative forms. Dominant organizations will lobby the state to modify legal institutions in order to shield their cores and routines from environmental changes. These mutual interactions will hinder the emergence of alternative forms and extend the conservative stage of dominant forms, even if the dominant forms are no longer effective in changing the environment. In sum, a strong state either helps or hinders transitions, depending on the stages.

Proposition 2. The stronger the state, the faster the transition to the reformative stage, but the slower the transition to the conservative and reactionary stages.

The role of civil society concerns information costs in the market. There have been numerous studies showing how civil society enhances information democracy and economic justice in the market (see Hague and Loader,

1999). Information democracy lowers information costs by making market information readily available to decision-makers. When decision-makers are producers, lowered information costs will enable them to collect information on success and failure of various strategies, adopt effective innovations, and throw away ineffective inertia (Scott and Davis, 2007: 293; Zuboff, 1988: 9). In short, the strong civil society helps transitions to the reformative, and later to the reactionary, stage. When decision-makers are consumers, the civil society provides consumers with better information on which producers are more reliable and dependable. Less reliable forms and practices will be consequently selected out of the market by consumers' choices. In short, the strong civil society helps a transition to the conservative stage. Therefore, the strong civil society helps all the transitions and will eventually shorten the lifespan of an organizational form.

Proposition 3. The stronger the civil society, the stronger the information-democracy and the shorter the lifecycle of organizational forms and practices.

Applications and Limitations

The typology discussed in this paper is not designed to describe perfect organizational forms. Rather, the typology mentioned is intended to play paradigmatic roles for identifying a gap in research and for pursuing studies on the evolutionary dynamics of organizational forms and institutions. The dynamism at the macro-level has been announced as top priority by organizational theories but rarely met the expectation both in organizational ecology and in neoinstitutionalism. To achieve this goal, four modes of organizational behavior are proposed here by crossing two behavioral dimensions adopted from organizational ecology (inertia vs. change) and neoinstitutionalism (normative vs. deviant) in the order of the lifecycle of an organizational form: *innovative* (deviant change), *reformative* (normative change), *conservative* (normative inertia), and *reactionary* (deviant inertia). In other words, the four modes do not imply four distinctive organizational behaviors, but rather, four dynamic stages of one behavior or form.

This paper also identified two distinctive characteristics of the outcome distributions underlying the two dimensions of behavior: low-risk vs. high-risk underlying inertia vs. change, and low-uncertainty vs. high-uncertainty underlying normative vs. deviant. These distributional characteristics

clarified that transition from the innovative to the reformative stage is associated with decreasing uncertainty, transition to the conservative stage with decreasing risks, and transition to the reactionary stage with increased uncertainty.

It is important to note that increases and decreases in uncertainty and risk entailed in organizational forms are not simply a technical matter but determined considerably by sociopolitical factors, and the sociopolitical factors that can affect information costs and competitive pressure in the market have been explored and several propositions proposed on the transitional mechanisms from one mode to the next mode of organizational behavior. Specified in those propositions are how each transition can be either promoted or hindered by sociopolitical resources at the organizational level and by the state and the civil society at the societal level. Those propositions are neither exhaustive nor empirically true yet. Further theoretical explorations and empirical tests are required to clarify the evolutionary dynamics of organizational forms and institutions in the market.

Although the typology described in this paper does not aim to cover all possible modes of organizational behavior, one important missing mode could be *ritual* behavior. Merton (1957) identified ritualism as a major mode of adaptation in his typology of individual adaptation. As is presented in Figure 4, ritualistic behavior observes institutionalized procedures but the behavior does not necessarily have a goal. It was specified at the beginning of this paper that this paper is interested in goal-oriented organizational behaviors and, therefore, may not be bothered by ritualistic behaviors in Merton's typology for human adaptation. Long ago, however, neoinstitutionalism noticed the ritualistic characteristic of many organizational practices in an aimless pursuit of legitimacy (Meyer, 1977; Meyer and Rowan, 1977). This ritualism is often suggested as the cause of perpetuating an institution in spite of its questionable effectiveness. In sum, ritual organizational behaviors could be a significant stage during the lifecycle of an

		Cultural Goals	
		-	+
Institutionalized Means	+	Ritualism	Conformity
	-	Retreatism	Innovation

Figure 4. Merton's Modes of Individual Adaptation.

organizational form but is currently ignored in the above typology. A ritual stage might be positioned between the reformative and the conservative stages or between the conservative and the reactionary stages.

It should also be clarified that not all organizational forms pass the four stages in sequential order during their lifecycles. It is needless to say that most organizational experiments die at the innovative stage without progressing further. Some business fads and fashions (Strang and Macy, 2001) could skip the reformative stage, suddenly dominate a market at the conservative stage for a short period of time, and rapidly disappear without the reactionary period. These trajectories, marginalized in the typology here, might be better examined by other typologies (see Abrahamson 1991, for an example). It is also informative that the selective attention of decision-makers play an important role in diffusing not necessarily superior innovations (Denrell, 2005; Denrell and Kovács, 2008; Denrell and March, 2001; Strang and Macy, 2001). Roughly speaking, accelerating and skipping transitions between stages may be affected by how decision-makers correctly or erroneously estimate the risks and uncertainties entailed in strategic choices. Due to the fact that this paper provided a measurable formalization of risk and uncertainty, it could be a promising approach to examining implications between objective levels of risk and uncertainty and subjective estimations of them.

References

- Abrahamson, Eric. 1991. "Managerial Fads and Fashions: The Diffusion and Rejection of Innovations." *Academy of Management Review* 16(3): pp. 586-612.
- Alvarez, Sharon A. and Simon C. Parker. 2009. "Emerging Firms and the Allocation of Control Rights: A Bayesian Approach." *Academy of Management Review* 34(2): pp. 209-227.
- Baumol, William J. 1990. "Entrepreneurship: Productive, Unproductive, and Destructive." *Journal of Political Economy* 98(5): pp. 893-921.
- Benartzi, Shlomo and Richard H. Thaler. 1995. "Myopic Loss Aversion and the Equity Premium Puzzle." *Quarterly Journal of Economics* 110(1): pp. 73-92.
- Carroll, Glenn R. and Michael T. Hannan. 2000. *The Demography of Corporations and Industries*. Princeton, NJ: Princeton University Press.
- Carroll, Glenn R. and Anand Swaminathan. 2000. "Why the Microbrewery Movement? Organizational Dynamics of Resource Partitioning in the U.S. Brewing Industry." *American Journal of Sociology* 106(3): pp. 715-762.
- Casella, George and Roger L. Berger. 2002. *Statistical Inference*. Pacific Grove, CA:

Duxbury.

- Chiles, Todd H., Alan D. Meyer, and Thomas J. Hench. 2004. "Organizational Emergence: The Origin and Transformation of Branson, Missouri's Musical Theaters." *Organization Science* 15(5): pp. 499-519.
- Davis, Gerald F., Kristina A. Diekmann, and Catherine H. Tinsley. 1994. "The Decline and Fall of the Conglomerate Firm in the 1980s: The Deinstitutionalization of an Organizational Form." *American Sociological Review* 59(4): pp. 547-570.
- Davis, Gerald F. and Henrich R. Greve. 1997. "Corporate Elite Networks and Governance Changes in the 1980s." *American Journal of Sociology* 103(1): pp. 1-37.
- Denrell, Jerker. 2005. "Why Most People Disapprove of Me: Experience Sampling in Impression Formation." *Psychological Review* 112(4): pp. 951-978.
- Denrell, Jerker and Balázs Kovács. 2008. "Selective Sampling of Empirical Settings in Organizational Studies." *Administrative Science Quarterly* 53(1): pp. 109-144.
- Denrell, Jerker and James G. March. 2001. "Adaptation as Information Restriction: The Hot Stove Effect." *Organization Science* 12(5): pp. 523-538.
- DiMaggio, Paul J. and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48(2): pp. 147-160.
- Dobrev, Stanislav D. 2005. "Competing in the 'Looking Glass' Market: Dynamics of Change in Strategic Position among U.S. Automobile Manufacturers." Working paper.
- Easton, George S. and Sherry L. Jarrell. 1998. "The Effects of Total Quality Management on Corporate Performance: An Empirical Investigation." *Journal of Business* 71(2): pp. 253-307.
- Fligstein, Neil. 1990. *The Transformation of Corporate Control*. Cambridge, MA: Harvard University Press.
- _____. 2002. *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies*. Princeton, NJ: Princeton University Press.
- Gneezy, Uri and Jan Potters. 1997. "An Experiment on Risk Taking and Evaluation Periods." *Quarterly Journal of Economics* 112(2): pp. 631-645.
- Greif, Avner and David D. Laitin. 2004. "A Theory of Endogenous Institutional Change." *American Political Science Review* 98(4): pp. 633-652.
- Greve, Henrich R., Jo-Ellen Pozner, and Hayagreeva Rao. 2006. "Vox Populi: Resource Partitioning, Organizational Proliferation, and the Cultural Impact of the Insurgent Microradio Movement." *American Journal of Sociology* 112(3): pp. 802-837.
- Hackman, J. Richard and Ruth Wageman. 1995. "Total Quality Management: Empirical, Conceptual, and Practical Issues." *Administrative Science Quarterly* 40(2): pp. 309-342.
- Hague, Barry N. and Brian D. Loader, eds. 1999. *Digital Democracy: Discourse and*

- Decision Making in the Information Age*. London, UK: Routledge.
- Hannan, Michael T. and Glenn R. Carroll. 1992. *Dynamics of Organizational Populations: Density, Legitimacy, and Competition*. New York, NY: Oxford University Press.
- Hannan, Michael T. and John Freeman. 1977. "The Population Ecology of Organizations." *American Journal of Sociology* 82(5): pp. 929-964.
- _____. 1989. *Organizational Ecology*. Cambridge, MA: Harvard University Press.
- Haveman, Heather A. 1993. "Follow the Leader: Mimetic Isomorphism and Entry Into New Markets." *Administrative Science Quarterly* 38(4): pp. 593-627.
- _____. 2000. "The Future of Organizational Sociology: Forging Ties among Paradigms." *Contemporary Sociology* 29(3): pp. 476-486.
- Haveman, Heather A. and Hayagreeva Rao. 1997. "Structuring a Theory of Moral Sentiments: Institutional and Organizational Coevolution in the Early Thrift Industry." *American Journal of Sociology* 102(6): pp. 1606-1651.
- Hirsch, Paul M. 1986. "From Ambushes to Golden Parachutes: Corporate Takeovers and an Instance of Cultural Framing and Institutional Integration." *American Journal of Sociology* 91(4): pp. 800-837.
- Ingram, Paul and Tal Simons. 2000. "State Formation, Ideological Competition, and the Ecology of Israeli Workers' Cooperatives, 1920-1992." *Administrative Science Quarterly* 45(1): pp. 25-53.
- Jung, Dong-II. 2008. "Birds of Different Feather Flock Together? Rhetorical Competition and the Convergence of Management Discourses." *Korean Journal of Sociology* 42(4): pp. 71-98.
- Knight, Frank H. 1921. *Risk, Uncertainty and Profit*. Boston, MA: Houghton Mifflin.
- Lieberman, Marvin B. and Shigeru Asaba. 2006. "Why Do Firms Imitate Each Other?" *Academy of Management Review* 31(2): pp. 366-385.
- Lune, Howard and Miranda Martinez. 1999. "Old Structures, New Relations: How Community Development Credit Unions Define Organizational Boundaries." *Sociological Forum* 14(4): pp. 609-634.
- March, James G. 1988. "Variable Risk Preferences and Adaptive Aspirations." *Journal of Economic Behavior and Organization* 9(1): pp. 5-24.
- March, James G. and Zur Shapira. 1987. "Managerial Perspectives on Risk and Risk Taking." *Management Science* 33(11): pp. 1404-1418.
- March, James G. and Herbert A. Simon. 1970. "Decision-Making Theory." In Oscar Grusky and George A. Miller, eds., *The Sociology of Organizations: Basic Studies*, pp. 93-102. New York, NY: Free Press.
- Merton, Robert K. 1957. *Social Theory and Social Structure*. New York, NY: Free Press.
- Meyer, Alan. D., Vibha Gaba, and Kenneth. A. Colwell. 2005. "Organizing Far from Equilibrium: Nonlinear Change in Organizational Fields." *Organization Science* 16(5): pp. 456-473.
- Meyer, John W. 1977. "The Effects of Education as an Institution." *American Journal*

- of Sociology* 83(1): pp. 55-77.
- Meyer, John W. and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83(2): pp. 340-363.
- Miller, Danny and Ming-Jer Chen. 1994. "Sources and Consequences of Competitive Inertia: A Study of the U.S. Airline Industry." *Administrative Science Quarterly* 39(1): pp. 1-23.
- Miner, Anne S. 1994. "Seeking Adaptive Advantage: Evolutionary Theory and Managerial Action." In Joel A. C. Baum and Jitendra V. Singh, eds., *Evolutionary Dynamics of Organizations*, pp. 76-89. New York, NY: Oxford University Press.
- North, Douglass C. 1981. *Structure and Change in Economic History*. New York, NY: Norton.
- _____. 1991a. "Institutions." *Journal of Economic Perspectives* 5(1): pp. 97-112.
- _____. 1991b. *Institutions, Institutional Change and Economic Performance*. New York, NY: Cambridge University Press.
- Phillips, Damon J. and Ezra W. Zuckerman. 2001. "Middle-Status Conformity: Theoretical Restatement and Empirical Demonstration in Two Markets." *American Journal of Sociology* 107(2): pp. 379-429.
- Podolny, Joel M. 2001. "Networks as the Pipes and Prisms of the Market." *American Journal of Sociology* 107(1): pp. 33-60.
- Polanyi, Karl. 1944. *The Great Transformation*. New York, NY: Rinehard & Company.
- Powell, Thomas C. 1995. "Total Quality Management as Competitive Advantage: A Review and Empirical Study." *Strategic Management Journal* 16(1): pp. 15-37.
- Rao, Hayagreeva, Philippe Monin, and Rodolphe Durand. 2003. "Institutional Change in Toque Ville: Nouvelle Cuisine as an Identity Movement in French Gastronomy." *American Journal of Sociology* 108(4): pp. 795-843.
- Ross, Sheldon. 2002. *A First Course in Probability*. Upper Saddle River, NJ: Prentice-Hall.
- Ross, Stephen A., Randolph W. Westerfield, and Jeffrey Jaffe. 2005. *Corporate Finance*. New York, NY: McGraw-Hill/Irwin.
- Ruef, Martin. 2000. "The Emergence of Organizational Forms: A Community Ecology Approach." *American Journal of Sociology* 106(3): pp. 658-714.
- _____. 2004. "The Demise of an Organizational Form: Emancipation and Plantation Agriculture in the American South, 1860-1880." *American Journal of Sociology* 109(6): pp. 1365-1410.
- Schaffer, Robert H. and Harvey A. Thompson. 1992. "Successful Change Programs Begin with Results." *Harvard Business Review* 70(1): pp. 80-89.
- Schneiberg, Marc. 2007. "What's on the Path? Path Dependence, Organizational Diversity and the Problem of Institutional Change in the US Economy, 1900-1950." *Socio-Economic Review* 5(1): pp. 47-80.
- Scott, W. Richard. 2008. *Institutions and Organizations*. Thousand Oaks, CA: Sage Publications.

- Scott, W. Richard and Gerald F. Davis. 2007. *Organizations and Organizing: Rational, Natural, and Open System Perspectives*. Upper Saddle River, NJ: Pearson Education.
- Scott, W. Richard, Martin Ruef, Peter J. Mendel, and Carol A. Caronna. 2000. *Institutional Change and Healthcare Organizations: From Professional Dominance to Managed Care*. Chicago, IL: The University of Chicago Press.
- Shackle, G. L. S. 1972. *Epistemics & Economics: A Critique of Economic Doctrines*. New Brunswick, NJ: Transaction Publishers.
- _____. 1979. *Imagination and the Nature of Choice*. Edinburgh, UK: Edinburgh University Press.
- Simons, Tal and Paul Ingram. 2003. "Enemies of the State: The Interdependence of Institutional Forms and the Ecology of the Kibbutz, 1910-1997." *Administrative Science Quarterly* 48(4): pp. 592-621.
- Singh, Jitendra V. 2006. "Ecology, Strategy and Organizational Change." In Joel A. C. Baum, Stanislav D. Dobrev, and Arjen van Witteloostuijn, eds., *Ecology and Strategy: Advances in Strategic Management*, pp. 177-214. Oxford, UK: Elsevier.
- Sorenson, Olav and Toby E. Stuart. 2001. "Syndication Networks and the Spatial Distribution of Venture Capital Investments." *American Journal of Sociology* 106(6): pp. 1546-1588.
- Strang, David and Michael W. Macy. 2001. "In Search of Excellence: Fads, Success Stories, and Adaptive Emulation." *American Journal of Sociology* 107(1): pp. 147-182.
- Thaler, Richard H., Amos Tversky, Daniel Kahneman, and Alan Schwartz. 1997. "The Effect of Myopia and Loss Aversion on Risk Taking: An Experimental Test." *Quarterly Journal of Economics* 112(2): pp. 647-661.
- Tolbert, Pamela S. and Lynne G. Zucker. 1983. "Institutional Sources of Change in the Formal Structure of Organizations: The Diffusion of Civil Service Reform, 1880-1935." *Administrative Science Quarterly* 28(1): pp. 22-40.
- Uzzi, Brian. 1996. "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect." *American Sociological Review* 61(4): pp. 674-698.
- _____. 1997. "Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness." *Administrative Science Quarterly* 42(1): pp. 35-67.
- Walton, Mary. 1986. *The Deming Management Method*. New York, NY: Pedigree Book.
- Weber, Max. 1970. "Bureaucracy." In Oscar Grusky and George A. Miller, eds., *The Sociology of Organizations: Basic Studies*, pp. 5-23. New York, NY: Free Press.
- Westphal, James D., Ranjay Gulati, and Stephen M. Shortell. 1997. "Customization or Conformity? An Institutional and Network Perspective on the Content and Consequences of TQM Adoption." *Administrative Science Quarterly* 42(2): pp. 366-394.
- Williamson, Oliver E. 1981. "The Economics of Organization: The Transaction Cost

Approach." *American Journal of Sociology* 87(3): pp. 548-577.

Zider, Bob. 1998. "How Venture Capital Works." *Harvard Business Review* 76(6): pp. 131-139.

Zuboff, Shoshana. 1988. *In the Age of the Smart Machine*. New York, NY: Basic Books.

KANG JEONG-HAN is Assistant Professor of Sociology at Yonsei University. His research areas cover organizations and institutions, mathematical sociology, health and aging, and information sociology. His recent publications appeared in *Administrative Science Quarterly*, *Sociological Methods and Research*, and *Journal of Gerontology: Social Sciences*. Address: Department of Sociology, Yonsei University, 134 Shinchon-dong, Seodaemun-gu, Seoul, 120-749, Korea [Email: jkan9130@gmail.com]

HAN SANG WON is an M.A. candidate in sociology at Korea University. His research interests include organizational theory, economic sociology, collective action and social movements, and Bayesian methods. Address: Department of Sociology, Korea University, Anam-Dong, Seongbuk-Gu, Seoul, 136-701, Korea [Email: ajagajaigija@hanmail.net]

