# On Waves, Clusters, and Diffusion: A Conceptual Framework

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This article makes a conceptual and theoretical contribution to the study of diffusion. The authors suggest that the concept of diffusion be reserved for *processes* (not outcomes) characterized by a certain uncoordinated interdependence. Theoretically, the authors identify the principal sources of clustered policy reforms. They then clarify the characteristics specific to diffusion mechanisms and introduce a categorization of such processes. In particular, they make a distinction between two types of diffusion: *adaptation* and *learning*. They argue that this categorization adds conceptual clarity and distinguishes mechanisms with distinct substantive consequences.

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The renaissance of diffusion research in political science has corrected an imbalance in

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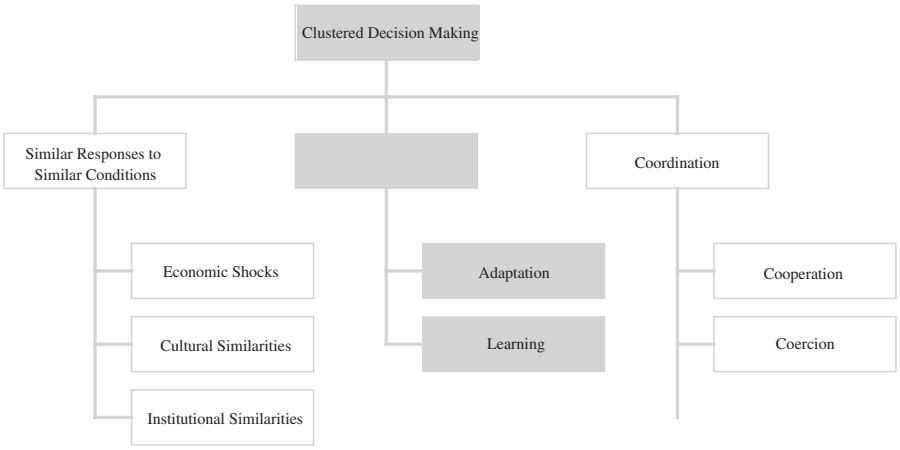
the study of democratization and economic liberalization. Indeed, an irony of the veritable stampede to explain waves of democracy and promarket reform is that scholars left undeveloped the very dynamic implied by the waves themselves: that one transition increases the probability of another transition (i.e., *diffusion*). To be fair, scholars have rarely assumed that state actors operate independently of the decisions of their counterparts in other capital cities. In fact, their assumption is probably just the contrary. Nonetheless, the supply of clear hypotheses and accompanying empirical tests concerning the how, when, and why of democratic and neoliberal diffusion is decidedly limited. This state of affairs is changing on several fronts. Most of the advance has occurred on the empirical side, as scholars using cross-national data have attempted to track the patterns and sequence of adoption of democratic and liberal economic reform.[1] Accompanying these efforts has been a renewed interest in refining econometric methods to estimate spatial and network effects (Anselin and Cho 2002; Ward and Gleditsch 2002; Franzese and Hays 2004). This article contributes to the theoretical and conceptual component of this valuable research program.

Our goal is to distill some conceptual, theoretical, and substantive insights from recent empirical work on diffusion and to suggest a framework for future research. Conceptually, we review the use and meaning of the concept of diffusion and related terms, most of which are usually invoked only metaphorically and so lack precise meaning. Theoretically, we introduce a framework of diffusion processes that, we believe, adds conceptual clarity and emphasizes the substantive implications of the various mechanisms. This last point distinguishes our framework from others. We argue that diffusion research would benefit from attention to the performance and efficiency implications of various mechanisms of diffusion. Such attention entails a shift from historical concerns to more political (even normative) concerns such as maximizing social welfare, a natural extension of diffusion research.

## Three Sources of Policy Clustering

Diffusion research is motivated by the observation that nation-states, or some other jurisdictional unit, choose similar institutions within a fairly circumscribed period of time. Such behavior results in temporal and spatial *clusters* of policy reform. Why might such *clustering* occur?[2] Consider three general classes of explanation (Figure 1). One conventional answer is that countries respond similarly, but independently, to similar domestic conditions. For example, countries democratize because of political or economic pressures within their country—pressures that exist simultaneously for leaders in other countries. The assumption underlying such explanations is that decision makers operate without regard to the behavior (perceived or predicted) of other states. We might think of such an explanation as the baseline answer, one predominant in comparative politics and international political economy and, undoubtedly, one with *some* causal power.

FIGURE 1
**EXPLANATIONS FOR CLUSTERED DECISIONS**




A second alternative is that clustered policy making is *coordinated* by a group of nations, a hegemonic power, or an international organization. Examples of this type might include the "horizontal" processes of international collaboration and cooperation described by scholars of "epistemic communities" (Haas 1992) or the "vertical" processes such as coercion by important donor countries and international financial institutions (see Levi-Faur 2005 [this volume] on the "vertical/horizontal" distinction).

There is a third possibility, however, that combines an element from each of these first two alternatives. One might think of it as a set of processes characterized by interdependent, but uncoordinated, decision making. Under this conception, governments are independent in the sense that they make their own decisions without cooperation or coercion but interdependent in the sense that they factor in the choices of other governments. In other words, *uncoordinated interdependence*. This is exactly the class of mechanisms for which we reserve the term *diffusion*. To be sure, it is a decidedly *general* class of processes. One can imagine a fair number of mechanisms that satisfy its criteria: for example, learning, imitation, bandwagoning, emulation, and mimicry. Even economic competition, to the extent that it affects policy choice, fits this definition of diffusion (Elkins, Guzman, and Simmons 2004; Simmons and Elkins 2004). Having stipulated this definition, we should stress that we have no interest in conceptual proliferation; if anything, our hope is to consolidate terms and encourage a shared vocabulary.

## The Concept of Diffusion: Cause or Effect?

"Diffusion" is one of several important social science constructs in need of definitional clarity. Its use is widespread and growing. A rough indicator of such is its appearance in journal titles in sociology and political science. Since 1950, fifteen to twenty titles with diffusion appear each decade until the 1990s, when the number spikes to thirty-seven.[3] Yet its meaning across these studies is muddled. A principal source of confusion, we find, concerns its use as both outcome and process.

The term comes into our thinking in part as a metaphor from the natural sciences and, as such, usefully evokes the image of the *spread* of something across space. For some scholars, diffusion connotes just that: an outcome characterized by a disseminated practice or policy. For example, Strang and Soule (1998) and Eyestone (1977) defined it as the "spread of something within a social system" and "any pattern of successive adoptions of a policy," respectively. As such, the term suggests the *dispersion* or *dissemination* of a practice[4] throughout a population: that is, multiple adoptions of basically similar practices. In the natural sciences, diffusion usually refers to the spread of molecules from an area of high concentration to one of low concentration, resulting in a more uniform, and thinned-out, distribution of the molecules. With the spread of social practices, however, this sense of "thinning out" is irrelevant, if not altogether wrong. That is, the source or epicenter of diffusion is not necessarily "depleted" when the practice spreads to another area. Likewise, the version of the practice that spreads is not necessarily any less intense.

For most sociologists and political scientists, however, "diffusion" is not an outcome but the flagship term for a large class of mechanisms and processes *associated* with a likely outcome. Consider several prominent examples:

> the process by which an innovation is communicated through certain channels over time among the members of a social system. (Rogers 1995, 5)
> [when] prior adoption of a trait or practice in a population alters the probability of adoption for remaining non-adopters. (Strang 1991, 325)

The implication is an *interdependence* among units such that the adoption of the practice by one actor alters the probability of its adoption by another. This is the important sense of diffusion expressed in Strang's (1991) definition. The idea of *diffusion-as-process* as opposed to *diffusion-as-outcome* is often quite pronounced. In some studies, one will sometimes even see an explanatory variable labeled "diffusion" in a multiple regression table (e.g., Kopstein and Reilly 2000)—an explicit designation of diffusion as a process. Thus, some refer to diffusion as an outcome and imply a process, while others (a majority) define diffusion as process and imply an outcome.

Should we think of diffusion as a dependent or independent variable? Following the majority of diffusion scholars, our preference is to treat it as a class of mechanisms (specifically, those characterized by uncoordinated interdependent mechanisms). Moreover, while such mechanisms will very likely lead to the dissemination of the policy or practice in question, it is critical—at least, analytically—to de-link

TABLE 1
**SELECTED TERMS RELATED TO DIFFUSION**

| Diffusion-as-Outcome | Diffusion-as-Process |
|---|---|
| Isomorphism (Powell and Dimaggio 1991) | Contagion (Li and Thompson 1975; Midlarsky 1978) |
| Convergence (Kerr 1983; Bennett 1991; Drezner 2001) | Spatial Autocorrelation (Anselin 1988) |
| Waves (Huntington 1991) | Demonstration Effect (Huntington 1991) |
| Homophily (Lazarsfeld and Merton 1954) | Imitation (Westney 1987; Jacoby 2000) |
| Homogeneity | Mimicry (Meyer and Rowan 1977) |
| | Emulation (Bennett 1991) |
| | Policy transfer (Dolowitz and Marsh 2000) |
| | Bandwagoning (Ikenberry 1990) |
| | Galton's Problem (Ross and Homer 1976) |
| | Cascades (Bikhchandani, Hirshleifer, and Welch 1998) |

process from outcome. Some mechanisms that we may still wish to call diffusion may not result in the widespread dissemination of a given practice. Consider, for example, the case in which a policy adoption serves as a model to be emulated by some countries and to be avoided by others. Reforms in the United States, because of the country's mixed international reputation, often inspire just such a polarized effect (Elkins 2003). This simultaneous attraction and repulsion may not result in any substantial spread of the practice at the macro level, but it may produce diffusion-like effects upon closer inspection (i.e., clustering along different networks). Similarly, one can imagine waves of policy adoption that we would not describe as diffusion. Consider, for example, a practice that spreads throughout a population as actors adopt it in concert, but independently. It is reasonable to think that reforms provoked by exogenous shocks—such as economic slumps and natural disasters—would be enacted regardless of the actions of other states. Such a reform would surely be one of mass adoption and dispersion, but if it lacks an exchange of some sort between actors, it is not diffusion as scholars have come to use the term. As such, it does not make much sense to tie the idea of dissemination to the definition of diffusion, although their association is logical and natural.

We are left, then, with a definition that focuses on process, not outcome. All things considered, Strang's (1991) definition appears to capture fairly concisely the meaning of diffusion of interest here. Strang defined diffusion as the process by which the "prior adoption of a trait or practice in a population alters the probability of adoption for remaining non-adopters," a definition that captures the idea of uncoordinated interdependence while leaving open the question of the practice's spread.

The duality of diffusion as cause and effect helps us categorize some of the various concepts related to diffusion, which tend to fall along one of the two dimensions. Terms such as "isomorphism" or "contagion" give further meaning to the

nature of dispersion and of interdependence, respectively. Table 1 presents a short inventory of such terms.

## Types of Diffusion

Note that in the above definition, the kind of interdependence implied by diffusion is left largely unspecified. As we illustrate further below, an actor's adoption can alter the probability that another will adopt in both positive and negative, indirect and direct, ways. Nevertheless, there is one important quality that distinguishes diffusion mechanisms from other interdependent, or "international," explanations of policy dispersion. The interdependence in diffusion is *uncoordinated*. Thus, the actions and choices of one country affect another, but not through any collaboration, imposition, or otherwise programmed effort on the part of any of the actors. This distinction splits a large group of explanations that some scholars prefer to lump as "external," or "international," factors. For example, in a pioneering study of such factors, Whitehead (1986) catalogued a set of "international" explanations of democratization, which included everything from imperialism to imitation. Such categorization often leads to research questions that pit "internal" or "domestic" influences against "external" or "international" influences. Of course, no explanation is so neat as to be wholly international or wholly domestic. Nevertheless, it is appropriate to characterize diffusion as one of a set of "international" or "external" explanations in the sense that it shares with such explanations the element of interdependent decision making. We should think of diffusion as an important subtype of international factors characterized by the lack of coordination among actors.

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*Under this conception, governments are independent in the sense that they make their own decisions without cooperation or coercion but interdependent in the sense that they factor in the choices of other governments. In other words,* uncoordinated interdependence.

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A number of scholars have attempted to catalog the processes involved in diffusion (Savage 1985; Powell and Dimaggio 1991; Strang and Soule 1998; Jacoby

2000; Levi-Faur 2005). Upon inspection, one can suggest any number of motives and pressures involved in interdependent processes. Our perusal of the literature uncovered upwards of thirty distinct species of diffusion, as we have defined the class of mechanisms. How one categorizes these processes, of course, will depend upon the purposes of the study and one's taste for parsimony. In our work, we have found it useful to lump and split mechanisms for both theoretical and normative reasons. That is, mechanisms in the same family should exhibit the same causal logic, and ideally, this shared logic should lead to a distinctive social welfare outcome. Can we, in other words, identify diffusion mechanisms that yield superior results for a country's citizens? We suggest a division of diffusion mechanisms that, we believe, makes just such a distinction. We think of diffusion mechanisms as one of two kinds: those for which another's adoption alters the value of the practice and those for which another's adoption imparts information. Each of these two broad classes, *adaptation to altered conditions* and *learning*, comprises a set of varied mechanisms. Below, we identify and describe three important mechanisms within each class, although this list is not meant to be exhaustive. We should also emphasize that mechanisms within these two classes are often complementary. David Levi-Faur (2004), in a constructive critique of Simmons and Elkins (2004), pointed out very clearly how such mechanisms can operate simultaneously.

### *Adaptation to altered conditions*

In this class of mechanisms, the policy decisions of one government alter the conditions under which other governments base their decisions. Typically, the decisions alter the value of the policy for others. In this sense, one can think of these decisions as producing externalities—externalities that subsequent adopters must factor into their decision calculus. One can imagine any number of mechanisms that might fit under this class. We identify three critical ones below: *cultural norms*, *support groups*, and *competition*.

*Cultural norms*. Norms may be understood as common practices whose value to an actor stems largely from their prevalence in a population. We can think of them almost like network externalities, then, since the benefits of adopting rise as a direct result of the number—or proportion—of others that adopt. But exactly what kinds of benefits accompany increases in prevalence? In terms of norms, the predominant benefit is reputational. Joining a growing majority of other actors confers a degree of legitimacy or, in the case of a negatively valenced practice, *cover* from criticism.

The logic behind these factors follows very closely the "tipping," or "threshold," models that Schelling (1978) and Granovetter (1978) have described. The basic intuition is that most actors are highly sensitive to the number, or proportion, of other actors that have adopted the policy. The idea of "thresholds" or "critical mass points" is a useful (although not necessary) device with which to understand the process. Consider an example from Granovetter. An individual faces the decision of whether to participate in a riot. Arguably, the probability that one would partici-

pate in a riot increases as the number of participants increases (the logic being that the greater the number of participants, the greater the immunity from apprehension).[5] There is a certain level of participation, a threshold at which an individual will decide to participate in the riot. Presumably, these thresholds will be different for different individuals. For example, Schelling suggested that it is usually the case that 5 to 10 percent of the population is committed to one choice or the other, regardless of what others decide to do, and the rest are highly dependent, but to different degrees, on the choices of others.

*Pragmatic policy makers considering political reform are cognizant that they are joining a network of other users on which they will depend for advice, support, and service of these very same institutions.*

One can imagine countless examples of such threshold behavior. Schelling's (1978) absorbing book runs us through everything from professional hockey players' use of helmets to seminar attendance. What is common to these examples is that an increase in the number or proportion of adopters confers a certain degree of legitimacy, or immunity in cases of illicit practices, upon the potential adopter. Our contention is that this dynamic describes the way social norms function with respect to economic and political reform. Consider the case of political rights policies. There one sees that a country's propensity to maintain a policy that is viewed negatively in the international community—say, the death penalty—decreases as the proportion of countries with that policy decreases. It is only a small number of countries (e.g., the United States) whose threshold for world approbation is so high that they have, at least to date, resisted the wave of changes. The death penalty is but one example. Other political and civil rights should work the same way.

Of course, the tipping effect can go the opposite direction as well. That is, actors may be tempted to opt out of a practice once a certain number of others have adopted it. This will occur if there is some fear of crowding or a desire for uniqueness. One may imagine that this dynamic occurs with "isolate" nations such as Libya or Cuba. However, while isolate nations may be more comfortable with their uniqueness, it is not the case that they seek it. Cuba under Fidel Castro, for example, found itself alone only after the cold war. Until then, Castro sought a much

more central position in the international community and actively promoted a "tip" in the opposite direction than that which occurred in 1989.

*Support groups*. Numbers of participants, or adopters, can confer credibility or immunity on a practice. There are other ways—apart from reputation—that the number of users alters the incentives for adoption. As economists who study industry standards have found, users derive practical benefits from a strong network of other users (Katz and Shapiro 1985, 1986). The simplest case is that in which the number of users directly increases the value of the product, as in the case of a telephone network in which the greater the number of individuals who subscribe, the more people there are with whom one may communicate. A well-known example of this phenomenon is the story of the QWERTY keyboard. Because of the positive network externalities associated with following the QWERTY standard (that is, access to the growing number of QWERTY typists), typewriter manufacturers failed to adopt more efficient keyboards (David 1985).

However, one can imagine a set of more indirect benefits arising from strong network of users, benefits that are critical to the choice of economic or political practices. One of these is the increase in technical support. It is well known that consumers of everything from automobiles to computer software are drawn to the technical support benefits accompanying a large network of users. For example, in the social sciences, the statistical software Stata, and more recently R, have become predominant in part because of the enormous advantages of add-on program code developed and shared by their large communities of users. Forces of this kind are equally strong in the development of economic and political policies. Policies to regulate capital flow or rules to regulate the powers of the legislature and the president are not especially easy for a government to design and maintain on its own. It is extremely helpful to have a community of users, preferably one with skills and knowledge, who are committed to refining and improving the practice. Adopting countries desire pools of expertise that they can draw on for policy enhancements and ancillary policies. Elkins (2003) showed that these sorts of externalities are important to constitutional delegates faced with the choice of electoral system and that of presidentialism versus parliamentarism. Pragmatic policy makers considering political reform are cognizant that they are joining a network of other users on which they will depend for advice, support, and service of these very same institutions. Like that for cultural norms, the mechanism in the technical support argument follows very closely the dynamic that Schelling (1978) and Granovetter (1978) set forth in their tipping models. That is, each government will have a certain threshold of the number (or quality) of users, below which it will not be likely to adopt a policy.

*Competition*. Competition over scarce resources is another diffusion mechanism that alters the payoffs of policies for governments. Essentially, one country's adoption of a political or, more likely, economic policy can have a very strong effect on its competitiveness, whether that be for foreign capital, direct loans, a contract to host the Olympics, or any investment or honor. Simmons and Elkins (2004)

made this argument with respect to transitions to liberalization in the capital account, current account, and exchange rates. The argument is simple. If we assume that governments are interested in attracting capital investments in their country, and we assume that restrictions on exchange rates and the capital and current accounts increase the price of investing in a country's market, then it is easy to see how the one country's adoption of liberal policies will disrupt the competitive equilibrium for other countries. By removing restrictions, the price of a country's investment products dips and lures investors away from investments in other countries with higher prices. Ceteris paribus, a government would prefer more investment at home, and so there is some pressure to adopt liberal policies as a result of similar moves elsewhere. Of course, there are benefits to restrictive policies (namely, stability), which may predispose a government to restrict absent competition. Competitive forces will necessarily compete against these motives. Competition is not commonly considered a type of diffusion, but it shares the essential qualities that characterize more ideal instances of diffusion.

### *Diffusion via learning*

The second broad class of diffusion mechanisms concerns the exchange of information or, from the perspective of the adopter, *learning*.[6] In a critical sense, these approaches are quite different from those discussed above. In learning processes, another actor's adoption does not alter the conditions of adopting. Rather, the action provides information about such conditions, including the benefits and drawbacks of adopting.

The premise behind such explanations is that the actions of others are more instructive to the individual than are his or her internal drives or needs. The work of social psychologists has done much to substantiate this premise in the past fifty years. Among others, Festinger's (1950) theory of social comparison and Merton's (1968) work on reference groups are prominent statements of this doctrine. Bandura's (1977) social learning theory has been especially useful to diffusion scholars. In Bandura's model, individuals are not equipped with internal repertoires of behavior. Except for the most basic reflexes, actors are almost fully dependent upon external models for understanding the consequences of certain actions.

How does social learning operate in the context of institutional development? Under the best of circumstances, policy makers in nation-states learn in the same way social scientists might. That is, they recognize a problem in the organization or execution of service delivery, develop some basic theory about how to solve the problem, review the various solutions available, and attempt to ascertain the effectiveness of these solutions. Such is the "laboratory of democracy," where California can learn from Wisconsin's welfare experiment or from Oregon's health care trials. The same process occurs at the international level. Westney's (1987) account of policy borrowing in Japan during the nineteenth century demonstrates this sort of learning.

What is interesting about learning, from a diffusion perspective, are the numerous ways that it can go wrong. The worldwide policy environment turns out to be a sloppy laboratory, and inefficiencies develop as a result of some predictable biases and limitations in the learning process. The fundamental problem with social learning at this level is that national policy makers often have difficulty assessing the consequences of the various policies. Policy makers are "cognitive misers" (Fiske and Taylor 1991) as much as anyone else. As boundedly rational actors, they rely upon a set cognitive heuristics to make sense of these sometimes complicated policy choices. We describe three important learning "methods" (or, rather, biases) that cognitively constrained policy engineers follow.

*Information cascades*. In the situations of the greatest uncertainty, actors may have no other information than the knowledge of whether others have adopted the policy. In this case, individuals may reason that they should take advantage of the accumulated wisdom of past individuals' decisions. The logic is the same that one would use in choosing between two restaurants that are equal in many obvious characteristics: a common decision rule is to choose the restaurant with more patrons. The trouble, of course, is that aggregated decisions can point to what appears to be a clearly optimal restaurant (or policy, as it were) even if these decisions are the result of a few and important choices by early adopters (who may or may not have had good information).

We can call this sort of problem an *information cascade*. Bikhchandani, Hirshleifer, and Welch (1998) developed a model of this process that demonstrates that choices of an entire sequence of actors can depend exclusively on the decisions of the first two or three actors. This can be true not only if the actors are initially indifferent about the choice but also if they are predisposed against the choice of the first three!

Thus, it is conceivable that information cascades will produce convergence toward one policy choice even in situations in which actors know nothing other than who has adopted what policy. Of course, in reality actors may try to gather more information than simply who has adopted what practice. Specifically, they may hope to draw inferences about the effectiveness of the various policies. Again, however, policy makers are limited by the data available to them, their resources to undertake analysis, and their own cognitive faculties. These limitations encourage a process of learning characterized by a dependence on highly selective samples of policy models. Below, we describe two processes that have predictable diffusion effects: learning from *available* models and learning from those in one's *reference group*.

*Learning and availability*. Individuals often have difficulty retrieving a full sample of information and tend to base their decisions on only those instances that are available to them (Kahneman, Slovic, and Tversky 1982; Weyland 2004).[7] The result is that the choice set of policy makers will be limited to policies of states that are immediately accessible. Actually, these highly available models bias the learning process in a number of ways. One way, of course, is that the more available the

model, the more likely it will be included as a data point in the analysis of alternatives. As such, these models will also be amenable to less scientific methods of analysis by policy makers who, seeking to legitimate predispositions or conclusions they already hold, introduce these cases as representative examples in a less deliberate, more rhetorical forum.

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Another way that a policy's availability can affect an actor's decision is through increased familiarity. Taste—whether it be for food, music, art, or political parties—is often acquired, and individuals have a tendency to prefer practices familiar to them. Such attraction might stem in part from a strategy of risk reduction: familiar choices may appear to be safe choices. However, it is also probable that familiarity breeds appreciation and shapes tastes. As such, surrounding oneself with highly available examples of policy can lead to an appreciation, or at least tolerance, for that policy.

Thus, a policy's availability can distort the learning process and increase its chances of adoption in another country in a number of ways. In the international arena, which policies will be more available than others? One clear expectation is that experiences of those governments with which one communicates and interacts will be most available. Indeed, the idea that communication among actors transmits ideas is one of the prevailing assumptions in the broad diffusion literature (Rogers 1995). However, it is also likely that the policy of *prominent* nations will be highly available, and consequently, policy makers will tend to weight those cases disproportionately. For example, it is likely that for many democratizing countries, the United States will be the most available case of presidentialism. So while the performance, however measured, of presidential systems may be poor in the sample at large, it may *appear* high to those who have difficulty retrieving less well-known (and less well-performing) cases of presidentialism.

The most available policy models, perhaps, are those that are reputed to have been successful. Decision makers will understandably be drawn to such a policy, sometimes letting its success bias their evaluation of its effectiveness. Consider an example from Kahneman, Slovic, and Tversky (1982):

> In a discussion of flight training, experienced instructors noted that praise for an especially smooth landing is typically followed by a poorer landing on the next try, while harsh criticism after a rough landing is usually followed by an improvement on the next try. The instructors concluded that verbal rewards are detrimental to learning. (P. 10)

These practiced analysts made this judgment while ignoring the phenomenon of regression to the mean. Policy analysts often do the same thing. For example, they observe a short period of tremendous success or failure and make projections for the policy based on those early high or low marks. Enthusiasm over the initial success of a single program, for example, the fiscal program Domingo Cavallo designed for Argentina in the early 1990s, can fuel fad-like adoptions. Similarly, a year or so of abject failure can lead analysts to soundly reject any program of its kind. Long-term trends or low-profile cases—both of which are less "available"—will have less of an impact.

*Learning and reference groups*. Actors may pay more attention to some policy models more than others because they are more available. However, they may also prefer policy models from countries that are similar to theirs. In fact, a reliable finding in the voluminous literature on diffusion and social influence is that entities that share similar cultural attributes tend to adopt the same practices.[8] This is true not only of individual behavior like teen smoking (Coleman, Katz, and Menzel 1966) and voting (Huckfeldt and Sprague 1995) but also of collective behavior with respect to corporations (Davis and Greve 1997), nonprofit organizations (Mizruchi 1989), subnational states (Walker 1969), and indeed nations (Deutsch 1953). Why is this so? The primary reason is that imitating similar individuals is one of the simplest and most effective cognitive heuristics in the calculation of utilities. Actors negotiating a complex set of political choices regard the actions of actors with perceived common interests as a useful guide to their own behavior. A growing number of political scientists suspect that such shortcuts allow the mass public to negotiate a complicated political world (Brady and Sniderman 1985; Lupia and McCubbins 1998), and it is likely that the same sort of process describes the reasoning of leaders making difficult policy decisions. Rosenau (1988, 359; 1990, 213) posited just such a process, suggesting that decision makers have a strong "cathectic" sense of whom their nation should look like and model their government accordingly.

So which countries are likely to be relevant reference groups? For decision makers, the easiest way to identify appropriate reference groups is to compare their visible characteristics. Some of the more visible and defining national characteristics are geographic and cultural: the country's region, the language its citizens speak, the religion they practice, and the country's colonial origins. It follows, then, that policy makers will align their country's policies with those of geographically and culturally proximate nations.

## Implications of Diffusion Types

Years ago, Dankwart Rustow (1970, 347) justified the study of transitions to democracy by paraphrasing Georges Clemenceau that "history is far too important a topic to be left just to historians." Of course, it is no longer necessary—if it ever was so—for "transitologists" to defend questions of regime development in mainstream comparative politics and international relations journals. Indeed, explaining waves of political reform as tidal as "democratization" and "neoliberalism" constitutes a major subfield within comparative politics. Nevertheless, Rustow's defense highlights an unease with "genetic" versus "functional" research questions within political science. Specifically, one wonders whether (as political scientists) it is to our comparative advantage to trace the origin of political species as opposed to describing and predicting their effects. To be sure, fifty years of thriving scholarship on the topic are enough to demonstrate the value of the former. Furthermore, it is worth emphasizing that the effects of policies and institutions have their roots in the origins of these entities. As such, genetic and functional explanations necessarily converge. Just the same, it is incumbent upon "genetic" scholars to remind readers of the substantive implications of their historical findings.

To be sure, diffusion explanations are intriguing in their own right. Part of the intrigue is that diffusion implies that governments are making choices that they would not make if left to their own devices. These "detours" in the policy process are indeed interesting from a historical or political development perspective. However, they also portend important consequences for the quality of government policies. In particular, we see two interesting possibilities. Policy detours may mean that governments adopt suboptimal or inappropriate policies designed for the needs of others. Alternatively, detours may mean that governments adopt policies superior to those they have the resources or knowledge to engineer for themselves. The question, then, is whether diffusion is responsible for a nation's squeezing into ill-fitting but fashionable institutions or whether it leads them to the most functional and efficient ones available? We might lean toward the first conclusion, if only for our cultural preference for creativity and originality over imitation and conformity. However, the second conclusion appears equally plausible, especially after a number of scholars have begun to burnish the image of imitation, emphasizing its utility as a cognitive shortcut for problems whose answers are not always obvious (e.g., Lupia and McCubbins 1998). Imitation, in this light, is not slavish. It is an efficient and effective mode of behavior for policy makers. Thus, we see two distinct possible outcomes. Below, we argue that these outcomes depend crucially on the particular mechanism of diffusion.

To begin, recall the distinction between *adaptation* and *learning*. This categorization divides two classes of mechanisms with wholly different theoretical foundations—theoretical, that is, in the sense of the individual behavioral motivations and processes at work. The intrinsic difference rests on whether individuals are motivated by changes in the payoffs associated with different practices or if they are motivated by changes is their "scientific" evaluation of the practices. As a practical

matter, this distinction is useful in that it stakes out the theoretical space well: the simple binary division is exhaustive, while still parsimonious. In the interest of knowledge accumulation, the hope is that this division organizes mechanisms into useful "schema," which will be useful to future researchers. While such organization can be useful in the interest of improving scholarly discussion, the theoretical distinction that we suggest divides two sets of mechanisms with potentially opposite implications for social welfare. That is, the distinction between classes of diffusion has real consequences for the quality of institutional reform. Specifically, we suggest that mechanisms of diffusion in the *adaptation* class are likely to lead to the adoption of suboptimal institutions—institutions inferior to even those that actors could engineer themselves. On the other hand, those mechanisms in the *learning* class are likely to result in optimal institutions, institutions that actors would not necessarily have the means or motivation to design themselves.

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*The question, then, is whether diffusion is responsible for a nation's squeezing into ill-fitting but fashionable institutions or whether it leads them to the most functional and efficient ones available?*

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This difference in outcome results from two unrelated factors. First, actors driven by a shift in payoffs *(adaptation)* may or may not develop practices that are suited to their needs. By definition, the actors' focus is not on the merits and outputs of the institutions themselves but on the ancillary benefits associated with the adoption of the institution. In the case of *learning*, however, actors are focused squarely on the merits of the institution. In fact, the desire for a more efficient set of institutions is the very motive for their search through the foreign database of policy alternatives. Admittedly, some of what we call *learning* is hardly scientific. Indeed, some scholars may prefer a more general label for such mechanisms, say "information motives," that does not imply a studied, deliberate decision process. Nonetheless, even through cognitively constrained methods of research, actors can be successful in approximating the results of a more sophisticated methodology. Also, their motive to *improve* their institutions suggests that they will more often than not do better for themselves by searching internationally than they would if left to their own devices.

A second factor that distinguishes the welfare effects of these two sets of processes is the level of commitment and internalization associated with the adopted institution. Here, I suggest that institutions only really work when there is a firm commitment to their installation. Part of this commitment involves what we might call the "internalization" of the principles undergirding the reform. Actors internalize the principles and rationale of the reform when they accept and understand the need for reform, as well as the logic of the reform. Accepting the rationale and the logic of the reform leads to a certain degree of commitment to implementing the reform and seeing it through.

Therefore, we can expect diffusion to have very different implications for social welfare according to the particular mechanism at work. Identifying the mechanisms of diffusion, in this sense, takes on more importance than a simple accounting of historical sources. Indeed, understanding the path to institutional reform tells us much about the probable performance of the reform. With the widespread adoption of democracy and market reforms, albeit with very different degrees of success, such distinctions become increasingly important.

## Conclusion

A principal goal of this article is to identify a useful set of concepts and mechanisms for the empirical investigation of diffusion. Given the recent acceleration in empirical work on the subject, however, we also hope to stimulate a more active and focused research program examining the language and causal processes of diffusion. Understandably, the empirical methods and data needed to test the presence of various mechanism will likely lag behind their specification. Nonetheless, it is essential to map out potential causal paths, whether or not they can be subjected to empirical validation. Most important, it is critical that researchers develop expectations for the substantive implications of their theorized causal paths. Investigation of these implications represents a logical extension and payoff for diffusion scholars.

## Notes

1. A critical mass of diffusion scholarship has emerged on both democratization (Starr 1991; O'Laughlin et al. 1998; Coppedge and Brinks 1999; Kopstein and Reilly 2000; Elkins 2003; Gleditsch and Ward 2004) and economic reform (Simmons and Elkins 2004; Weyland 2004). This special issue is the first to apply it to the field of regulation.

2. We prefer to think of this as "clustering" rather than "convergence." The latter seems to suggest (at least to us) a move toward universal adoption of a policy or institution. However, since we leave open the possibility of diffusion resulting in *pockets* of like policies—that is, local homogeneity, but global heterogeneity—we prefer the term "clustering."

3. Findings from a search on the term "diffusion" in titles of articles in the JSTOR archive of political science and sociology journals.

4. "Practice" is the general term for an idea, technology, policy, or innovation that spreads. "Adoption" is the term used when an actor selects or takes on the practice.

5. Corroborating experimental research from social psychology substantiates the principles of the tipping model. For example, Asch's (1951) work on conformity showed that individuals were much more likely to trust their own information when they had just one or two confederates siding with them. Some "safety in numbers" is also evident in the Milgram (1975) experiments on obedience.

6. See Meseguer (2005 [this volume]), Lazer (2005 [this volume]), and Wilson (2004) for interesting elaborations of learning mechanisms of diffusion.

7. Kurt Weyland (2004) linked this and other cognitive heuristics to diffusion in a very useful framework.

8. As Rogers (1995, 274) stated, "The transfer of ideas occurs most frequently between individuals . . . who are similar in certain attributes such as beliefs, education, social status, and the like."

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