



From Categories to Categorization: Studies in Sociology, Organizations and Strategy at the Crossroads

Things That Last? Category Creation, Imprinting, and Durability ^{*}
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THINGS THAT LAST? CATEGORY CREATION, IMPRINTING, AND DURABILITY ☆

Eunice Y. Rhee, Jade Y. Lo, Mark T. Kennedy
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ABSTRACT

Drawing on the notion of imprinting, we develop a framework for understanding category emergence and durability by suggesting that the durability of a category reflects its emergence conditions. We propose four ideal-typical mechanisms – consensus, proof, fiat, and truce – that arise from differences in the degree of agreement and the centralization of the authority regarding category definitions. Our framework not only relates category durability to emergence but also highlights the role of category promoters and constituencies in an ongoing process of category

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maintenance. We discuss implications for understanding the dynamics of the categorization process in various social and product market contexts.

Keywords: Categories; category emergence; imprinting; category durability

INTRODUCTION

Categories lend stability and regularity to markets, organizations, and social reality more generally by reflecting collectively observed patterns of social interaction although widely used category systems change as the ongoing process of categorization yields the emergence of new kinds of things or the disappearance of obsolete ones. While category emergence and dissolution are thus critical to understanding when categories will be durable or impermanent, the study of categories has mostly focused on relatively stable markets or fields in which “penalties ensue from not respecting market order principles” (Durand & Paoletta, 2013, p. 1104). More recently, advances in category studies have broadened our understanding beyond the fundamental “categorical imperative” thesis (Zuckerman, 1999) by calling for an increased attention to its boundary conditions (Khaire & Wadhvani, 2010; Lo & Kennedy, 2015; Pontikes, 2012), strategic self-categorization (Granqvist, Grodal, & Woolley, 2013; Rhee, 2014; Vergne, 2012), and category emergence (Kennedy, Lo, & Lounsbury, 2010; Navis & Glynn, 2010).

Although the categorization process may well explain why certain categories are more durable than others, this link remains largely unexplored. A number of studies have recently examined the process of category emergence (Kennedy, 2008; Khaire & Wadhvani, 2010; Lee, Hiatt, & Lounsbury, 2016; Lo & Kennedy, 2015) or category decline (Kuilman & van Driel, 2013), yet these works say little about what makes categories more or less durable between such processes. Here, we aim to address this issue by focusing directly on the relationship between category creation and category durability. We suggest that the emergence conditions and later development of a category should not be seen as cleanly separate phases of a category’s life course but instead as mutually defined elements of continuum (Rhee & Lo, 2016) in which a category’s early emergence conditions affect its subsequent usage and longevity. In particular, we argue that category durability reflects the power relations among interest groups who participated in category emergence.

To develop this argument, we begin by examining different mechanisms for category creation. Especially, for social phenomena, there are obviously

different mechanisms by which a new category may emerge and come into use – how it becomes recognized. Although categories often emerge from a widespread agreement about the meaning and value of the new category, categories can also emerge in the absence of such widespread agreement. Categories can emerge amid disagreement about what they mean when, for example, they are declared by a powerful authority or when one faction imposes a definition on others as settlement among actors with different views about a category's meaning, boundaries, or legitimacy. Thus, the categorization process varies in terms of both the degree of agreement and the type of authority that establishes category definitions.

Using the types of authority and degrees of agreement that mark category emergence, we theorize four ideal-type mechanisms for category emergence that we call *consensus*, *proof*, *fiat*, and *truce*. Consensus refers to a process where a category emerges from a widely shared basis and where there is no central authority to make the final decision or to dictate the meaning or legitimacy of the category. With *truce*, authority is also decentralized, and all sorts of actors can legitimately weigh in on whether the category should or should not exist, on what it should entail and so forth, and yet the focal category does not enjoy widely supported status and may remain a contested subject among constituencies. With both *fiat* and *proof*, authority is centralized and in the hands of a few actors, but in the case of *proof*, there is little controversy or disagreement about the newly emerged category, while in the case of *fiat*, there is often opposition against or debate about the legitimacy or meaning of the focal category.

We further propose that the dominant mechanism during a category's emergence process – that is, whether a category emerges primarily through consensus, proof, fiat, or truce – will continue to influence the category's development and trajectory. Specifically, we draw on the notion of imprinting to argue that the mechanisms of emergence will affect subsequent category durability, that is, the category's continued usage and eventual longevity. In particular, we suggest that the four paths to category emergence will influence durability through two interrelated mechanisms: the accessibility of the categorization base and the way in which the category subsequently is accepted and reproduced in general discourse surrounding it. Thus, this article aims to develop a framework to conceptualize these four processes and theorize how they may advance our understanding of category emergence and durability. Our primary focus here is, thus, on the initial conditions of category emergence, although category durability may be temporal and will also be affected by the nature of subsequent conditions.

While we intend our account of emergence and durability to apply to categories beyond the product market or organizational form categories prevalent in organization studies, we choose to advance our argument by focusing mostly on the emergence and durability of market categories. While market category systems provide a convenient starting point, we are interested in a more fundamental understanding of categories that can be applied more broadly to the wide variety of repeated, recognizable patterns in social structures that constitute the cognitive schema and normative landscape of human life. Pursuing this more general view of categories and categorization yields a framework useful for studying social phenomena that range from institutions in the conventional sense – those that are legitimate and enjoy a taken-for-granted status – to practices or roles that are widely recognized and understood and yet still divisive, for example, human traffickers, loan sharks, blackmailers, and so forth. Our framework thus contributes to not only category studies but also institutional analysis more broadly.

MECHANISMS OF CATEGORY EMERGENCE

Prior studies on category emergence suggest that interested actors play a role in promoting new categories. For example, in studying the emergence of modern Indian arts, [Khaire and Wadhvani \(2010\)](#) documented how diffused actors of interest – including auction houses, art historians, critics, gallery owners, and collectors – achieved consensus through deliberate and extensive discussion of the meanings and identities for the artwork. In studying the category “organic foods,” [Lee et al. \(2016\)](#) showed that the organic category was initially promoted by a relatively small group of interested actors who acted as standards-based certification organizations. These actors demarcated boundaries and promoted producer conformity to its prototypical identity and sought to legitimate and grow the organic food market category nationwide ([Lee et al., 2016](#)).

In fact, the role of actors in the creation of new categories and social practices has received increasing attention in institutional analysis as well. Actors who “create a whole new system of meaning that ties the functioning of disparate sets of institutions together” ([Garud, Jain, & Kumaraswamy, 2002](#)) are often called “institutional entrepreneurs” ([Garud, Hardy, & Maguire, 2007](#)). Such actors are embedded in existing institutional arrangements and established social orders which constrain their capacity for agency, but existing institutions also provide cultural resources and toolkit ([Swidler, 1986](#)) that give actors the capacity to imagine and enact on alternative possibilities.

Table 1. Processes of Category Emergence.

		Category Authority	
		Centralized	Decentralized
Category	High	Proof	Consensus
Agreement	Low	Fiat	Truce

As mentioned above, our approach to category emergence and durability focuses on the kind of authority and degree of agreement among the actors and constituents involved in the process of category creation and acceptance. In particular, we propose understanding category emergence in terms of what we call *category authority* and *category agreement*. To explain these terms, we use category authority to refer to whether the power to establishing categories is centralized versus diffused, and we use category agreement to refer the degree to which the category is accepted and agreed upon within and among various constituencies with a stake in what the category might mean. While category authority calls attention to the type of power that establishes a category with the different kind of actors who have stakes in defining it, category agreement focuses on whether there is high versus low agreement between audiences’ normative evaluations of a category.

Using category authority and category agreement, we propose four ideal-typical mechanisms for category emergence: consensus, proof, fiat, and truce (Table 1). These four mechanisms are ideal-typical in the sense that they serve as a starting point for analyzing and conceptualizing a category’s emergence process against the backdrop of a field’s social and power structure. However, the emergence processes may rarely appear in such a clean-cut way and often times may be associated with more than one mechanism. Nonetheless, we argue that it is useful to identify the dominant mechanism in a given category’s initial emergence, and that initial conditions will have a long-lasting effect on the category’s durability.

CONSENSUS

When category authority is decentralized and category agreement is high, categories emerge through a process of *consensus*: that is, audiences and constituents of an emergent category largely agree upon its meaning and legitimacy without deliberate coordination or formal approval from

established authorities. Consensus is the most widely studied process of category emergence and is largely consistent with the vast prior literature in institutional theory that has examined how new actors and practices come to be widely shared and accepted.

Returning to the classic study of the diffusion of hybrid corn seeds, [Ryan and Gross \(1943\)](#) explained how this new type of seeds was spread through a consensus-based mechanism. Emerging from an initial experimental stage in the late 1920s, hybrid corn seed remained unfamiliar to most farmers until the early 1930s. However, in subsequent years this new seed quickly gained popularity and was in practically universal use among Iowa farmers within a little over 10 years. Based on the extensive case study of [Ryan and Gross \(1943\)](#), the knowledge about this emergent innovation was first spread by salespeople, then later by word-of-mouth diffusion process. When asked about their sources of information about the new seed, a large number of farmers reported that the most influential source of knowledge was their neighbors – people who shared similar traits with them and whom they trusted. Although local government agencies and educational institutions also played a role in the process, it was evident that the primary reason that hybrid corn seeds experienced such an impressive adoption among Iowa farmers was that this innovation was weaved into the cognitive schema of local farmers through interpersonal media. Although the corn produced from hybrid seed had certain distinctive attributes – such as smaller ear and kernels – which were not only different from conventional corns but also not physically appealing, many farmers were eventually willing to discard their old standards in evaluating “good” corn because the knowledge about hybrid corn seeds was gained from people whom they knew and trusted. Thanks to this organic, bottom-up process, the hybrid corn – as well as many other categories that emerged through a consensus-based process – was able to achieve a certain “taken-for-granted” status without the intervention of organized power or authority. Such categories also often enjoy collective agreement and understanding among a large basis of audiences without much controversies or power struggles as access to the evaluation of such new products and practices is quite direct for the audience in question. Experimentation with hybrid corn was not scalable in that it was possible to try out new seeds on a smaller plot before making a wholesale switch, but even more importantly such experimentation allowed the adopters to gain personal experience that was not mediated by experts or market intermediaries but instead emerged from their own day-to-day usage of the new product. The category’s authority thus

derived from the adopting actors' direct interaction with it and the ability to evaluate it based on their own criteria of relevance.

PROOF

When category authority is centralized with a relatively small faction of society that generally agrees with each other about how to weigh arguments and justify their decisions, categories emerge through a process of proof. As in the normal sense of the word, proof requires a clear set of rules for evidence and argumentation, and such rules are often established and maintained by a subgroup of society with training, history, or other standing to determine and protect such rules. When such an authority uses their rules of evaluation to establish a new category, controversy or disagreement about a new category is difficult to mount even if the category is objectionable to others. In such situations, other audiences generally accept the category because they lack the standing or knowledge required to properly evaluate the new category or oppose it. This may be the case when the novel category is established by a professional community or authoritative agency. We could say proof is the mechanism that establishes, for example, new classes of bonds or mutual funds, but the same could be said for discoveries of new elements in the periodic table of elements.

For instance, dedication by a group of high-status molecular biologists enabled establishing the legitimacy of recombinant DNA research in cancer treatment among audiences such as the government by demonstrating the value of their approach based on accepted principles of evaluation that were much less accessible to individual experience (Fujimura, 1997; Wry, Lounsbury, & Glynn, 2011). Similarly, the notion of Cleantech emerged due to the activities of a relatively small group of entrepreneurial actors connected to each other as part of the Cleantech Venture Network (now Cleantech Group) and who established the cultural meaning of the new category (O'Rourke, 2009). At times, a larger group of advocates may be involved in the process of category emergence. For example, the emergence of the modern Indian art category was driven by "the audiences of interest – auction houses, art historians, critics, gallery owners, and collectors" (Khaira & Wadhvani, 2010, p. 1284) who were all involved in the process of constructing the meaning and identity for the modern Indian artwork, whereas the New Nordic Cuisine was led by a group of culinary professionals, high-profile political supporters, scientists, and the media (Byrkjeflot, Pedersen, & Svejenova, 2013). However, what combines all

these cases is a situation where authoritative experts or powerful actors were involved in defining and promoting the emergent category, and their activities were instrumental in increasing the cognitive and normative legitimacy of the focal category, making it understandable and appealing to the target audience while still retaining expert authority and thus control over the category's label and content.

FIAT

When categories are established by declarations of centralized authorities against significant opposition, we can say emergence is by fiat. That is, category emergence occurs by fiat when category authority is centralized and category agreement is low. Obviously, some categories are established even when there are substantial audiences who find them undesirable or even destructive; this occurs when there is a centralized authority with power to force the category and its implications on all others. As Foucault (1982) argues, such classification often involves power and suppression and "ordering the world within the confines of bureaucratic discipline" (Beckert & Musselin, 2013, p. 9). Even when the power to dictate a category may be controlled by a small group of powerful actors, the emergent category may not be accepted by some or all of the audience members, leading them to deny the new category legitimacy while still recognizing its existence and indeed its potential or realized power to negatively influence the interests of these audience members.

For example, the way US Census Bureau classifies race and ethnicity as an example of a category being established through the action of a powerful actor. Dating back to 1790 when the Census was used to estimate the size of the slave population, the classification system continues to have implications on social status, which has been contested (Lamont, 2000). Also, some state governments in the United States have pioneered the establishment of criminal colleges, that is, educational programs that offer convicts the opportunity to obtain education while in jail. Although appealing to some political audiences, the concept of criminal colleges faced strong opposition and invoked heated political debates. Detractors doubt the moral value of such proposals, suggesting that the government should not use taxpayers' money to educate convicted criminals when regular citizens have to obtain such education using their own means. Because the idea of establishment of colleges for criminals is against certain constituents' political interests and normative values, this initiative has become a highly controversial government

action in terms of how the state budget should be spent, and even though such programs can be created through fiat, their basic feature is the exercise of power to establish a novel category.

In these examples, authority to create or legitimize a novel category is centralized in the hands of state actors who retain this power due to their legitimacy as collective actors. However, fiat may also be established through the exercise of power by nonstate actors. For instance, powerful market actors may be able to introduce novel product or service categories against the will not only of their competitors but also of their customers through an exercise of sheer market power. Although such actions may fuel resentment and the search for alternatives, it does not negate the fact that at times categories can be created and established as an act of domination (Lawrence, Winn, & Jennings, 2001). For example, Rössel and Beckert (2013) examine the German wine market where there exists two competing and mutually exclusive classification systems: an official quality classification system backed up by state agencies and a strong alternative classification system used by wine producers that fall outside of the official classification system. The alternative classification system, however, is considered higher in status, resulting in higher wine prices in the market.

TRUCE

When two or more contending category authorities do not agree about a category, the category may emerge nonetheless through a process we call as truce. By truce, we mean the ordinary usage of the word: that is. Truce between opposing factions becomes possible when either (1) one faction in a contest gains enough of an upper hand over others to force them to accept its terms of settlement or (2) opposing factions agree on the desirability of ending at least some aspects of their power struggle – even if they agree on little else. Thus, categories established by truce generally remain controversial.

In the case of mobile payments market, the difficulty of reaching agreement on the architecture of the market among participating firms sowed the seeds of its stumbled development. As noted by Ozcan and Santos (2015), because early market participants were mostly prominent players in different industries such as telecommunications or financial industries, their dominant position in their own industries prevented them to reach any meaningful consensus on important issues such as who owns the customer

and who deals with transaction security in this emergent market. This disagreement led to a weak compromise on market architecture and created numerous problems for resource allocation and meaningful collaboration. In studying an international consortium of 46 iSchools, [Patvardhan, Gioia, and Hamilton \(2015\)](#) documented how the scope, meaning, and identity of the category “iSchool” were contested and debated among member schools, although member schools agreed upon the label: “there was spirited debate about the meanings of even fundamental terms such as ‘information oriented’ and ‘interdisciplinary’” ([Patvardhan et al., 2015](#), p. 421). Such situations may also lead to the category embodying multiple and sometimes conflicting views, as in the case of the modern architecture where both modern organic architects and modern functional architects found their home ([Jones, Maoret, Massa, & Svejenova, 2012](#)) and in the case of iSchools where a category with a diverse set of meanings and practices resulted in benefiting actors with divergent interests ([Patvardhan et al., 2015](#)). What unites these cases, however, is the fact that the category emerges out of contests and struggles with no central authority in charge that may exercise power or arbitrate conflicting interests, leading to an uneasy stalemate between differing factions.

CATEGORY IMPRINTING AND ITS EFFECT ON CATEGORY DURABILITY

Until now, we have primarily examined the four different mechanisms – namely proof, consensus, fiat, and truce – to describe how new categories are constructed as a result of the power relations among interest groups. In the following, we turn to the ways in which these different paths affect the subsequent durability of categories that have emerged. Specifically, we argue that category durability will differ depending on the dominant mechanism through which the category was established by drawing on the notion of imprinting from [Stinchcombe \(1965\)](#). In particular, we suggest that the initial emergence condition will influence both the accessibility of the categorization base and the way in which the category subsequently is accepted and reproduced in media discourse surrounding it.

A few words are in order to more closely define the meaning of category durability. Specifically, what we mean by category durability is the extent to which both the label and practices or features of a focal category stay in use for an extended period of time. In other words, we see a category as

consisting of a label and practices or features (Tversky & Gati, 1978). If either the label or the features of a category is susceptible to change, such as when an existing category may be associated with a different set of practices, the category may become subject to redefinition, subsumption, or recombination (Kennedy et al., 2010). Category durability thus carries significant implications for those advocating the focal category and relevant audiences.

DEFINING CATEGORY IMPRINTING

As a starting point for understanding category durability, Stinchcombe's imprinting presents arguably one of the most central concepts that connect the conditions under which entities are founded to the subsequent persistence of that entity and the persistence of its particular features. Stinchcombe himself did not offer a precise definition or indeed did not use the term "imprinting" himself. However, in a recent review of the history and application of the imprinting concept, Marquis and Tilcsik offer a helpful definition, suggesting that imprinting consists of "a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods" (Marquis & Tilcsik, 2013, p. 201). The notion of imprinting thus suggests that the "characteristics of an entity shaped during a sensitive moment of its existence can persist for decades, in spite of subsequent environmental changes" (Simsek, Fox, & Heavey, 2015, p. 289). Such an understanding of imprinting resonates with the kind of processes we have described here, suggesting that imprinting will be helpful in elaborating how particular mechanisms of category creation such as proof, consensus, fiat, or truce will leave their imprint on the particular categories they produce by shaping the way the category is anchored among particular audiences and determining whether a category is more or less open to subsequent revision and contestation.

To develop our arguments, it is useful to first understand how our view of imprinting relates to and departs from its initial development and usage. While numerous scholars have invoked the concept of imprinting and applied it to a variety of settings, Stinchcombe's original articulation of the idea was primarily aimed at cross-organizational patterns. Starting with the industry as the level of analysis, Stinchcombe suggested that firms within an industry founded at the same time would share certain characteristics.

Specifically, Stinchcombe argued that “the organizational inventions that can be made at a particular time in history depend on the social technology available at that time [...] both because they can function effectively with those organizational forms, and because the forms tend to become institutionalized, the basic structure of the organization tends to remain relatively stable” (Stinchcombe, 1965, p. 153). Marquis and Tilcsik (2013) suggest that the fundamental mechanism of imprinting thus involves organizational practices and structures “that have been developed and are legitimate at a given time are relatively distinctive. Organizations are initially structured to fit the existing environment and then, because of subsequent inertia and institutionalization, continue to exhibit traces of the founding context” (p. 203).

Note that Stinchcombe’s original argument, in particular, points to the importance of institutionalization, suggesting that organizations can function effectively with their given forms because these forms tend to become institutionalized and thus are expected and sanctioned by external audiences. As Johnson (2007) notes, imprinting thus combines two separate processes: “first, the process by which technological, economic, political, and cultural elements of the founding context shape the characteristics of a new organization; and second, the process by which these founding characteristics are reproduced during the organization’s subsequent history” (2007, p. 98). Yet, the two processes of shaping the characteristics of the organization and the subsequent reproduction of those very characteristics may be intricately linked, as this reproduction will frequently depend on continued acceptance by external audiences.

Developing this line of argument, we want to suggest here that categories are imprinted by the mechanism of their production, not because they function effectively with those mechanisms but because the primary mechanism of a category’s creation is imprinted on both the category itself and its relevant audiences. In other words, following Johnson’s argumentation that imprinting consists of two processes relating to an entity’s characteristics and the subsequent process of how these characteristics are reproduced, we suggest that the imprinting of categories during their creation likewise involves two different processes that – while connected – operate at two different levels of analysis. These two processes relate to (a) the characteristics of the category itself and (b) its perception and acceptance by relevant audiences. Regarding the characteristics of the category itself, we argue that our four different mechanisms of category creation will result in categories that differ in the accessibility of their categorization base and thus the ability to revisit, contest, and change them. Regarding the perception and acceptance of a category by outside audiences, we argue that the four

different mechanisms of category creation will be differentially enshrined in cognitive accounts and collective memory and that these differences in social cognition again will leave categories differentially open to or protected from the ability to revisit, contest, and change them. We now turn to discuss both of these mechanisms of imprinting as they affect category durability.

CATEGORIZATION BASE AND SOCIAL COGNITION

The first process points to the importance of categorization bases; that is, the concepts and attributes on which categories themselves are founded and according to which they are perceived. Prior work on cognition has offered a variety of models as to how categorization bases may be conceptualized (Komatsu, 1992). For instance, Neisser (1987) describes a spectrum of six categorization bases that include perceptual properties, internalized criteria, and scientific authority. Extending this work, Rosa and Porac (2002) argue that categorization bases may be distinguished from each other based on their distance to embodied experience and that this variation will further be reflected in differing persistence of specific categories. Based on their study of category durability in the motorcycle industry, Rosa and Porac argue that “categorization bases that are close to embodied experience, such as perceptible properties and affordances, will give rise to shorter-lived categories relative to categorization bases that are further removed from embodied experience, such as historical criteria and scientific authority” (2002, p. 503).

Such arguments suggest that it is the accessibility of categorization bases to inquiry and experience that will eventually affect a focal category’s persistence within a system of categories. Further extending this argument, we suggest that the four mechanisms of category emergence (proof, consensus, fiat, and truce) will imprint upon category differences in a similar manner in the accessibility of its categorization base and that mechanisms with a lower degree of accessibility will tend to result in more durable categories, as lower accessibility will make it more difficult for audiences and constituencies to challenge such categories, with the opposite being true for mechanisms that imprint upon categories with a higher degree of accessibility.

Although the accessibility of a category’s knowledge base is to a large extent a feature of the category itself and thus presents a social affordance (Kaufmann & Clément, 2007), the interactive nature of accessibility points to the role of external audiences as actors that engage in the process of

examining and affirming or challenging the categorization base. This second part of the mechanism thus emphasizes the ways in which knowledge about a category is shared and maintained among outside audiences, a process that falls within the domain of the social construction of markets (Fligstein, 1996; Porac & Rosa, 1996). In this regards, Kennedy has argued that “as producers in a nascent market increasingly interact, the accumulating discourse embeds them in a shared cognitive network that enables their categorization” (2008, p. 271). Extending this argument, we suggest that mechanism of category creation will influence the ways in which perceptions of category creation are anchored among audiences and market participants. In a sense reversing the original imprinting image, Greve and Rao have argued that “founding events furnish a community with cultural elements such as cognitive accounts and normative rationales that become embodied in stories of the successful collective action” (2012, p. 637). Such arguments point to the processes of collective memory and institutionalizations that are present particularly in the media, which act as a key conduit of market sensemaking (Kennedy, 2008; Lounsbury & Glynn, 2001). As Lounsbury and Rao suggest, “often, product categories are maintained by industry media such as purveyors of trade magazines and publishers of trade directories and industry censuses (Hirsch, 1972; Rosa, Porac, Runser-Spanjol, & Saxon, 1999)” (2004, p. 971). Our argument here is that these processes of collective sensemaking about categories will be affected by category accessibility. Specifically, we argue that the particular mechanism dominant during a category’s emergence will thus leave the category more or less exposed to subsequent contestation as social cognition about the category is reproduced in public discourse.

In combination, the accessibility of categorization base and the social cognition about this categorization maintained in media discourse suggest a continuum of imprinting processes that range from the inaccessible (and thus more durable as it is closed off from inquiry) to the accessible (and thus less durable as it is open to inquiry). This continuum resembles a “chain of consciousness” (Comaroff & Comaroff, 1991, p. 29) that ranges from unconscious to conscious, with notions of hegemony and ideology being associated with the two end points. The implication for understanding the durability of categories seems evident. Unconscious, and thus inaccessible categories, is shared throughout a community and lies beyond discussion and negotiation, whereas conscious, and thus more accessible categories, remains open to contestation: “Hegemony, at its most effective, is mute,” while by contrast, “ideology babbles on” (Comaroff & Comaroff, 1991, p. 24). Nevertheless, we are not suggesting a deterministic view of

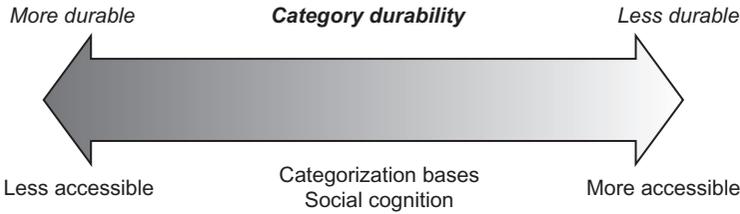


Fig. 1. The continuum of category durability.

imprinting that categories with less accessible knowledge bases can never be contested. Instead, we acknowledge that the accessibility of categorization bases and the categorization’s social cognition depend on the role of external audiences as they examine, affirm, or challenge the categorization base and make sense of the categorization at the same time. That is, the view advanced here explicitly embraces the notion that cultural meaning systems such as social ontologies are inherently unstable and in constant need of maintenance (Fiss, 2008; Kennedy & Fiss, 2013). It does suggest, however, that there is predictable variation in how mechanisms of category creation will leave their imprint on the category itself and be associated with subsequent category durability. The continuum of category durability based on the notions of categorization bases and social cognition is depicted in Fig. 1.

VARIATION IN CATEGORY DURABILITY

The notion of category imprinting through the founding process implies that the sensitive moment of category creation will imbue a category with characteristics that significantly affect its durability. We now consider the predictions regarding category durability associated with the four category creation mechanisms examined here.

As we have previously argued, proof involves the reliance on disciplinary regimes where a professional community tends to decide on the appropriate rules of evidence. As such, proof bears close resemblance to the notion of scientific authority as advanced by Neisser (1987) and suggested by Rosa and Porac (2002) as rendering a category inaccessible to experience. Challenging categories established by proof is difficult because the category itself is shielded through a process of ratification based on impersonal criteria. As a result, we would expect categories established by proof to be the

most durable. Second to proof, the notion of consensus also is based upon agreement, but while proof implies scientific rules of evidence, consensus merely indicates agreement, which may be based on normative judgments, or indeed mere convention, making them more open to contestation than categories established by proof. As such, we expect categories established by consensus to be less durable than categories established under proof.

While consensus and proof are both based on a process of agreement, fiat and truce are both anchored in the process of disagreement and potential, if not open contestation. In terms of accessibility, fiat points to the direct and open exercise of power to establish a category. However, power that has to be exercised and asserted is more directly accessible and open to contestation (Lukes, 1974). When the power structure changes, categories that were established due to fiat appear particularly vulnerable as they are likely to be imprinted with the memory of coercion. As a result, we expect categories established by fiat to be the third most durable.

Finally, we would expect categories established by truce to be the most instable. As a result of an uneasy stalemate where actors may agree to disagree, truce always carries within it the potential for the rearrangement of existing relations. Categories created by truce thus preserve the legitimacy of more than one possible order, making such categories even more instable than those created by fiat where only a single order is asserted. As a result, we expect categories established by fiat to be the least durable. To summarize, our arguments above suggest the following ordering of how category creation processes will affect category durability:

Proof > Consensus > Fiat > Truce

FROM CATEGORY EMERGENCE TO CATEGORY DURABILITY

In this section, we provide some examples to illustrate how the four emergence processes influence category durability.

Proof

As argued above, challenging categories established by proof is difficult because the category itself is shielded through a process of ratification

based on impersonal criteria not easily accessible to lay persons and is controlled by centralized power that may buffer potential contestations. This was the case with the category of obesity that classifies people based on their body fat. With clear classification criteria based on the Body Mass Index (BMI), scientific evidence showing the relationship between obesity and diverse health problems, and support from authoritative organizations such as the World Health Organization (WHO), the obesity category quickly became an established category that has implications not only for public policy but also for diverse markets such as fitness, food, medical treatment, fashion, etc.

Being promoted and popularized by a small number of experts, the development of a widely adopted index by medical professionals facilitated the category's emergence. The most prominent classification of body fat is the BMI, which was proposed by George Bray, then a Professor of Medicine at the UCLA School of Medicine, at the first international conference on obesity in 1979 (Fletcher, 2012), although its origin can be traced back to the 1830s when a similar index was used to measure the range of heights and weights of army recruits (Oliver, 2006). John Garrow, then a Professor of Human Nutrition at the University of London included a discussion of BMI in the textbook, *Obesity and Related Diseases*, starting in the late 1970s. BMI classification in Garrow's, 1988 textbook became widely adopted in the 1990s as he provided an expert evidence citing the Consensus Conference organized by the National Institutes of Health in 1985 (Fletcher, 2012). Garrow's influential position within the UK obesity coalition also spurred the wide adoption of BMI. As a result, BMI became a standardized measure for defining obesity and overweight by the late 1990s. Although there were still debates regarding the simplistic nature of the index, scientific research based on large-scale epidemiological data that indicate relationships between obesity and a range of health issues such as type 2 diabetes, fatty liver disease, and cardiovascular risk factors (Nicholls, 2013), as well as the pragmatic utility of the index in monitoring potential health risk facilitated the adoption of BMI (Garrow, 1988) gave rise to the obesity category. As popular media and scientific press used the language of such reports, a scientific consensus was rapidly formed, and the obesity category became part of a taken-for-granted public discourse (Fletcher, 2012), even as some recent researches have called for revising the standard definition of obesity, while others have noted the racialized nature of the medical and popular discourse around obesity and black women (Strings, 2015).

Consensus

Unlike proof that implies scientific rules of evidence and centralized authority to elaborate and dictate the rules, consensus merely indicates agreement, making categories established by consensus more open examination and editing. For instance, in studying the early thrift industry in the United States, Haveman and Rao (1997) documented the rise and fall of several forms of thrift organizations: terminating, serial, and several hybrid thrift plans. The emergence and evolution of these plan categories was gradual and fairly organic, in the sense that there was no centralized power or authority to dictate the creation or termination of any plan; rather, it was a result of coevolution of technical and institutional environments. As “embodiments of particular institutional logics,” or “theories of moral sentiments” (Haveman & Rao, 1997, p. 1607), these thrifts emerged through a process based on social consensus that fits the needs of the community of its time.

For example, the earliest form of thrifts – the terminating and serial plans – embodied a theory that emphasized cooperation and rigid structures to induce saving and was more of personal, communitarian organizations that relied on social relations to facilitate economic relations than impersonal for-profit corporations. This form of thrift was an effective solution in communities where people knew each other and valued frugality and hard work. But this stable, localized society was gradually displaced by newer types of plans when new technologies – such as the railroad, telegraph, telephone, automobile, newspaper, and airplane – greatly diminished geographic distance and reconstituted physical spaces (Haveman & Rao, 1997, pp. 1636–1637); as the technical environments changed, so did the “theory of moral sentiments” incarnate in organizational forms. In this case, neither theory of thrift was written in stone nor was it backed up by scientific argumentation. The prevalence of any given form of thrift in a given time period largely depends on the moral sentiments and technical environments of the society at that time and is subject to change once the circumstances shift.

Fiat

Even when category authority is centralized, at times the advocate of experts or authority may encounter heated debate or opposition from the audience in the process of promoting a certain category. Such contestation will not only carry along among audiences, but moreover, if the concepts on which the focal category is founded upon become unstable, the category

will be susceptible to change and even decline from increased contestation. The recent controversy over using wood pellets as source of energy production represents a case where, while the government, especially in Europe, drove the growth of the industry, the continued contestation by environmentalists recently armed with new scientific evidence, threatens the existence of the entire industry. [Hiatt and Park \(2013\)](#) showed how such activism against wood pellet producers have led to coordinated efforts among pellet ventures to reestablish a new collective identity.

In Europe, governments put in mandates as part of the European Commission's 2020 climate and energy plan to increase the contribution of renewables to total energy consumption in the European Union and heavily subsidized renewable energy consumption. For instance, the government-driven initiative that became effective in 2009, the UK Renewable Energy Strategy, made the United Kingdom the largest importer of wood pellets in the world, with a 28% share of the global market, in just over five years. Yet, the promised benefits of environmental benefits are being questioned by recent research findings, which argue that wood pellets could actually increase carbon emissions. As a result, an increasing number of environmental activists are targeting wood pellet producers ([Hiatt & Park, 2013](#)) and even the UK government is recently acknowledging the need to be more careful in evaluating sources of renewable energy. Thus, while the original emergence of the category was driven by an authoritative power, the underlying debate regarding the category's merit among audiences and new scientific evidence is resulting in a reconsideration of the category's long-term durability.

Truce

As we have suggested, categories that emerge out of truce are inherently unstable as they lack a central authority to dictate what rightly constitute a category or whether a category is socially appropriate. In situations where relevant groups of actors thus agree to disagree, contestation remains latent and the category is likely to continue to experience contestations among diffused groups of supporters and contenders, as the concepts upon which the category is built are precarious and the initial debate regarding the category's appropriateness is likely to persist as part of audience's perception of the category. For instance, in their description of the short-lived online grocery category, [Navis, Fisher, Raffaelli, Glynn, and Watkiss \(2012\)](#) describe how different market actors proposed competing and conflicting features associated with the online grocery category. In the absence of an

authority that could arbitrate between these claims and without clear categorical boundaries, the conflicting attempts to associate features with the category conspired “to make the category concept inchoate, both to the firms that populated the new market and to interested audiences of consumers, investors and the media” (Navis et al., 2012, p. 26). This is not to say that there were no firms labeling themselves as online grocers or no customers buying their products, but that the collective category failed to persist and by the mid-2000s had essentially ceased to exist.

THE INFLUENCE OF TEMPORAL AND SUBSEQUENT CONDITIONS ON CATEGORY DURABILITY

Our current approach has focused primarily on the role of initial conditions of category creation and their lasting effect on category durability. However, we also acknowledge how the initial conditions of category emergence may be overshadowed by later developments in the degree of agreement and/or the type of authority among actors and constituencies, which in turn can affect the category’s durability. For instance, for a category that emerged from *truce*, where the agreement among actors is low and the authority is decentralized, it is possible that a leading actor emerges as the category evolves, developing a more centralized authority to guide the meaning and boundaries of the category. In such cases, it becomes more difficult for external actors to access the categorization bases or the social cognition of the categorization, extending the category durability. In contrary, for a category that emerged from *consensus*, where the agreement among actors is high and the authority is centralized, it is possible that a subset of actors develops subcategories within the original category or extends the meaning and boundaries of the original category. In such cases, the initial agreement regarding the category’s meaning and boundaries will decrease as external actors tap onto diverse categorization bases or different social cognition of the categorization, thereby reducing the category’s durability.

The idea that category durability will be influenced by subsequent conditions is already indicated by the notion that category accessibility will affect collective sensemaking about these categories and social cognition maintained in media discourse. Understanding how subsequent conditions affect category durability shifts the focus to the more general processes by which social structures are reproduced and either maintained or eroded. In this regard, category systems as symbolic orders require significant maintenance

for their persistence. Like most other social systems, their reproduction tends to be threatened by social entropy (Zucker, 1988) that may lead to the gradual erosion of the assumptions on which they are based. Furthermore, the meaning of symbolic orders is often unstable (Scott, 1985) and open to challenges from prior social orders (Schneiberg, 2006). As a result, the “chain of consciousness” (Comaroff & Comaroff, 1991) ranging from the unconscious to the conscious not only affects the accessibility of imprinting processes, but also extends to the current conditions surrounding categories; contestation is least likely at the unconscious level where categories are taken-for-granted and is most present at the conscious level where different opinions are articulated.

This view of social categorization is an ongoing dynamic process that connects our work to a number of other research streams in the maintenance of social structures. For instance, the literature on institutional work has focused on “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” (Lawrence & Suddaby, 2006, p. 215), and it would seem that its insights carry implications for understanding the durability of categories more broadly. For example, one might expect that category durability will be affected by the presence of rituals that ensure the repeated enactment of relevant roles and boundaries (Dacin, Munir, & Tracey, 2010). Such arguments point to a recursive relationship between institutions and action (Lawrence, Suddaby, & Leca, 2009) that may also inform our understanding of how categories are reproduced or changed. In a similar manner, categorization is sensitive to techno-economic changes that may affect their usefulness, especially if such changes open up performance gaps (Abrahamson, 1996) and create opportunities for alternative explanations and ways of organizing (Barley & Kunda, 1992; Fiss, 2008). Although an exhaustive discussion of the ways in which ongoing conditions may affect the maintenance and contestation is beyond the scope of this article, our argument is that while the imprinting effect of category emergence is likely to have a lasting effect on category durability, it is by no means the only factor influencing category longevity or its absence.

DISCUSSION

We started with the premise that categories may emerge through different mechanisms, and that these mechanisms will have an imprinting effect on the focal category, continuing to influence its durability. The emergence

mechanisms that we discuss in this article vary along two dimensions: category authority, referring to the degree to which the power to determine or settle issues regarding a category is centralized versus diffused, as well as category agreement, referring to the degree to which the category is accepted and agreed upon by constituencies in the society. The dominant emergence condition will have long-lasting effects on the durability of a category because how the category emerges will affect the accessibility of categorization base and the social cognition about this categorization, which makes the focal category more accessible, more open to inquiry, and hence less durable or less accessible, less subjective to debate, and hence more durable. Categories thus vary along the taken-for-grantedness of their cognitive basis – an important factor underpinning the degree of agreement of the focal category. Categories that fit better with the audiences' cognitive and normative schema will be more likely to gain wide support, and this agreement status, combined with the power structure of category promoters, would shape and continue to affect the dynamics of the category during its life course.

Our framework has several theoretical implications. First, in spite of the recent work on category emergence (Kennedy & Fiss, 2013; Khaire & Wadhvani, 2010; Lee et al., 2016; Lo & Kennedy, 2015; Navis & Glynn, 2010) and the few studies on category failure or dissolution (Kuilman & van Driel, 2013), how the genesis of a category may be connected to its persistence and demise remains largely unexplored, leading us to theorize the imprinting effects of the initial condition on the category's longevity. By proposing how the power structure among category promoters and the agreement bases among constituencies may facilitate the emergence of categories in different ways, we also offer a more systematic theoretical treatment for category emergence, enriching our understanding of the different routes through which a category can come into use and become part of the social reality.

Second, by highlighting how different authority structures and agreement basis underpinning a category may shape the emergence of categories in different ways, we bring agency into the picture and aim to offer fresh insight for the ongoing structure-agency debate in social studies. Although past work on categories and categorization has largely focused on the constraining power of categories, recent work has started to look beyond the "categorical imperative" theme and explore the role of actors in changing or challenging existing categories or creating new ones. In this article, we take this effort one step forward and explore how the structure of the agency may both enable and constrain the agency itself; for example,

whether the authority and power is centralized or not will result in different emergence mechanisms and whether the emergent category fits with the constituency's cognitive and normative schemas will have a profound impact on the stability of the focal category. In other words, we acknowledge the importance of the role of actors but also wish to embed the conversation within a perspective that takes social structure and existing institutions seriously.

Third, our framework also has implications for institutional analysis. The different mechanisms of category emergence can be viewed as having different institutional underpinnings and therefore will be diffused and institutionalized in different ways. Categories that emerge through a consensus process, for example, are more likely to diffuse through a "mimetic" process as discussed by DiMaggio and Powell (1983), whereas categories that originate from a "proof" process, such as those approved by a small group of authoritative promoters are more likely to be seen as legitimate from the beginning and may be diffused through a normative process, whereas categories emerging through a "fiat," being dictated by a small number of powerful actors, may be diffused quickly through a process similar to what DiMaggio and Powell (1983) termed the coercive process, but the underlying disagreement also suggested inherent instability of the focal category. Moreover, by theorizing how a category may be more or less durable through its emerging conditions, our framework has an important implication for the institutional theory, suggesting that not all categories will be institutionalized and offer some powerful explanations regarding why some categories are more likely to be maintained and reproduced, whereas some others are subject to constant challenges and fail to be fully legitimated or institutionalized.

Our model also complements the work on the temporal dynamics of institutionalization by Lawrence et al. (2001). In their attempt to answer why some institutions are more stable and are institutionalized more quickly than others, Lawrence et al. (2001) developed a typology for the power mechanism supporting the institutionalization process. They argued that the four mechanisms – influence, force, discipline, and domination – affect the pace of institutionalization and the stability of the focal institution in different ways. Their model articulates the influence of forms of power supporting the institutionalization process, whereas our model complements their work by considering the structure of power and authority (centralized or diffused) and the agreement basis of the category or institutional arrangement in question, taking into account not only the dimension of actors' power and interests but also the role of cognitive and normative factors.

Our framework further has implications for practitioners, including not only producers who want to promote new market or product categories but also activists or institutional entrepreneurs who wish to change existing social arrangements. Our notion of category durability suggests that categories vary along their frequency of usage, stability, and longevity, suggesting opportunities for interested actors to look for signs indicating whether a category may be on its way up or down, and, depending on the authority and agreement basis of the category, how challengeable a category is. The proposition that a category's durability is linked to its emergence mechanism also offers insights for interested actors: to make a category more durable, category promoters should aim to make a case of "fiat" by not only seeking support from authoritative sources, ideally those with scientific knowledge or recognized expertise to approve the legitimacy of the emergent category, but also trying to embed the focal category within the broader cognitive scheme and value systems of the targeted audiences, so the focal category is more likely to gain support from both elite powerful figures and a wide base of constituencies.

While our goal here is to outline a general framework to understand the problem of category emergence and durability, we would also like to acknowledge several boundary conditions and limitations of our model. First, we believe that the institutional environment of the field where a category emerges will likely interact with the mechanisms that we propose in this article, thereby influencing the emergence trajectory of a category in more nuanced ways. For example, because different fields often feature different institutional logics (Thornton, Ocasio, & Lounsbury, 2012), some institutional environments may be more likely to facilitate one emergence mechanism over another. In the domain of profession, for instance, because the dominant logic values knowledge-based expertise and the source of authority hinges upon professional associations, one may observe more categories emerge through the process of proof than others. On the other hand, in the domain of the state, fiat may be the dominant mode of emergence, whereas in the domain of community, in which there lacks a centralized authority and values collective and cooperative norms, new categories are more likely to emerge through a consensus process. Besides the dominant logic of a focal field, other conditions of the field may also affect both the emerging and ongoing conditions of a category. For example, while we have emphasized the importance of a field's power structure and actors' relative status in the creation of new category orders and the maintenance of such orders after the initial condition, we also acknowledge that, for fields that situate at the intersection of multiple social domains, we may expect to

see more institutional entrepreneurs who are equipped with a broader set of social skills (Fligstein, 2001) or cultural repertoire (Swidler, 1986), which may enable them to overcome the constraints from the inherent social structure of a field. Such actors may not occupy the central position or have the highest social status in the field, but their structural position also frees them from the kind of identity commitment that often comes with a certain status order (Phillips, Turco, & Zuckerman, 2013) and they may even benefit more from certain strategic moves than their high-status counterparts (Durand & Kremp, 2016), which give them both greater freedom and incentive to innovate, promote, or challenge certain categories. As such, the structure and institutional conditions of a broader field may not only affect the initial conditions but also the dynamics throughout the life course of a category.

Another boundary condition that we would like to note here is that the framework we have developed pays relative little attention to the nature or inherent feature of a focal category. Arguably, some categories, such as natural categories – the kind of categories that serve to understand and classify the natural and physical world, for example – are less likely to be affected by the kind of mechanisms that we discuss here. Yet, we expect that whether the initial label and meaning of such categories are proposed by centralized authority or emerge through generalized consensus will still have an impact on the durability of such categories and that these forces should arguably be less critical than for most social, cultural, or market categories that are the primary focus of the literature on categories and categorization in organization theory.

As also noted above, although theorizing how ongoing conditions of both the focal category and the broader environment that a category situates in may affect the life course of a category is beyond the scope of this article, we also encourage future research to look into how these ongoing conditions may further affect the dynamics that we propose here. For example, since category authority is an integral part of our model, a natural direction for future research would be to inquire about how changes in the power structure underlying a category may affect its trajectory. In the case of proof, for example, if the central authority that endorses or promotes a particular category is decentralized or undermined, chances are that the durability of the category will also be adversely impacted. In the case of fiat, it is even more likely that the longevity of the focal category will be jeopardized by shifts in the power structure of category advocates. In the case of truce, the emergence of a new centralized authority that can clearly dictate or defend the legitimacy of the focal category may prolong

its durability. In sum, while we acknowledge that there are several boundary conditions to our framework, we are also hopeful that, by first delineating a parsimonious model for category emergence and imprinting effect, we have also opened up a rich avenue for future research that may take up where we leave off, exploring how the various conditions of the environment and of the focal category may reinforce or modify the kind of patterns that we argue here.

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