

Border Crossing: Bricolage and the Erosion of Categorical Boundaries in French Gastronomy

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Sociological researchers have studied the consequences of strong categorical boundaries, but have devoted little attention to the causes and consequences of boundary erosion. This study analyzes the erosion of categorical boundaries in the case of opposing category pairs. The authors propose that categorical boundaries weaken when the borrowing of elements from a rival category by high-status actors triggers emulation such that the mean number of elements borrowed by others increases and the variance in the number of elements borrowed declines. It is suggested that penalties to borrowing in the form of downgraded evaluations by critics exist, but decline as the number of peers who borrow increases. The research setting is French gastronomy during the period from 1970 to 1997, when classical and nouvelle cuisines were rival categories competing for the allegiance of chefs. The results broadly support the authors' hypotheses, indicating that chefs redrew the boundaries of culinary categories, which critics eventually recognized. Implications for research on blending and segregating processes are outlined.

L'Auberge de l'Ill, a restaurant run by the Haeberlin family in Alsace, France, has been continuously awarded three stars—the highest ranking—by the *Guide Michelin* since 1970. But beneath this consistent quality, the nature of the signature dishes offered to patrons has undergone a remarkable series of changes. In 1970, a visitor to L'Auberge de l'Ill could select from pure classical cuisine signature dishes such as Brioche de Foie Gras, Salmon

Soufflé, and Noisette de Chevreuil Saint Hubert (*venison*). Soon a rival category, nouvelle cuisine, emerged, and by 1980, pure nouvelle cuisine signature dishes such as Salade de Lapereau (young rabbit) replaced some of the classical cuisine signature dishes on the menu. Thus, L'Auberge shifted from being a purely classical cuisine French restaurant to being a hybrid one featuring both classical and nouvelle cuisines.

By 1995, the process of hybridization had evolved further, with the dishes themselves borrowing elements from both classical and nouvelle cuisines. In 1995, a patron could choose from ragoût de grenouilles poêlées, petit chou farci à la choucroute et aux grenouilles (fried frogs in stew, small cabbage stuffed with sauerkraut and frogs) and suprême de pigeonneau au chou en crépinettes, pastilla d'abats au foie d'oie (supreme of young pigeon with cabbage in crépinettes and giblets pastilla with goose liver). Stew and stuffed preparations are archetypal classical cuisine techniques, whereas supreme and crépinettes are nouvelle cuisine

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techniques. Pastilla and sauerkraut allude to the exotic influences of nouvelle cuisine, and the adjective “small” connotes the nuance, refinement, and diminutives typical of nouvelle cuisine.

This borrowing process blurred the boundaries between the two rival culinary categories, and the menus of many other elite French restaurants displayed the same pattern. How did this transformation occur? How did borrowing erode the categorical boundaries between the two rival cuisines? What were the consequences of borrowing for established elite French restaurants? These questions are not idiosyncratic to French gastronomy, but pertain to an understudied issue in cultural and economic sociology: how blending processes erode categorical boundaries.

More than two decades ago, Blute (1979:55) suggested that blending mechanisms may be far more prevalent in social systems than among biological organisms and merit the attention of social theorists. Yet, in their wide-ranging review of the literature on boundaries, Lamont and Molnar (2002:187) underscored the need to study “key *mechanisms* associated with the . . . bridging, crossing and dissolution of boundaries.” It is important not to overemphasize the strength of segregating mechanisms because blending processes work to erode boundaries (Hannan and Freeman 1989:57) even when the categories in question constitute an oppositional pair. One such blending process is recombination fueled by the copying or borrowing of the elements from the rival category. Such unchecked borrowing is a type of bricolage that combines elements from both categories, thereby attenuating boundaries unless it is constrained by segregating processes such as external sanctions. Although it is widely accepted that recombination is a source of blending (Aldrich, 1979; Axelrod and Cohen 2000; Hannan and Freeman 1989), there has been little research on how such recombination entails crossover and weakens categorical boundaries in markets.

A study investigating the causes and consequences of borrowing in a world of oppositional category pairs is attractive on a number of counts. First, when the categories are defined in opposition to each other, boundaries are strong, and they thus represent an extreme case compelling researchers to develop an account of borrowing that weakens boundaries. By con-

trast, boundaries are weaker when the categories are complementary because one can simultaneously be a member of multiple categories (Rosa et al. 1999). Second, when categories exist in an oppositional pair and boundaries are strong, researchers must address the question of how borrowing from a rival category is even possible because it can compromise the authenticity of membership in a category. Thus, oppositional category pairs present an opportunity for understanding the nature of authenticity and its fabrication. Finally, because only two categories exist, there is empirical tractability:—one can easily track the borrowing of techniques or elements from the rival category.

We suggest that when categorical boundaries are strong because of segregating pressures, borrowing is rare. Consequently, the mean number of elements borrowed is low, and variance in the number of elements borrowed is high. Conversely, when categorical boundaries weaken, the mean number of elements borrowed increases, but variance in the number of elements borrowed declines. Drawing on Peterson (1997), we suggest that authenticity means both originality and conformity to the conventions of a category or genre, and propose that the important thing is to conform to some of the conventions most of the time. Building on the idea of the Matthew effect (Merton 1968; Podolny 1993), we argue that high-status actors have more latitude to be original, and can borrow from a rival category. We hypothesize that borrowing by high-status actors jump-starts a process of borrowing by other actors such that the mean number of elements borrowed increases and the variance declines.

We then turn to the effects of borrowing on external valuations. Following DiMaggio (1987), we discuss how classification systems have two dimensions: hierarchy and potency. We elaborate the hierarchical organization within an oppositional category pair, distinguish between categorical purists and straddlers, and delineate how borrowing affects their fates. We suggest that borrowing leads to penalties when boundaries are symbolically potent, and note that the prevalence of borrowing lowers potency and the penalties for crossing categorical boundaries.

We explore these issues in a study of French haute cuisine restaurants because it is the ulti-

mate test case in which cultural distinctions are salient in the realm of gastronomy. Just as a researcher would go to Silicon Valley to study technological boundaries, we went to France to understand the operation of categorical boundaries in the culinary realm. French haute cuisine occupies a central place in French culture and exists as a gastronomic field in which the primary product (food) is linked to secondary intellectual discourse (Ferguson 1998). The categories of cuisine consist of codes, and can be empirically analyzed as a set of elements: techniques, and ingredients (Ferguson 2004:18).

At the start of the 1970s, the logic of classical cuisine defined the identity of French chefs until it was challenged by the rise of nouvelle cuisine with its own distinctive logic and role identities of chefs. Thus, classical and nouvelle cuisines were two oppositional categories with identifiable blueprints and codes of conduct. The sociological puzzle is not only that classical cuisine faced a high-status competitor, nouvelle cuisine, but also that borrowing-driven bricolage blurred the boundaries of both categories over time. In the following discussion, we develop a theoretical explanation for the antecedents of borrowing and its effects on external evaluations by critics, then test the resulting hypotheses in a study of French haute cuisine.

BOUNDARIES, BORROWING, AND BRICOLAGE

In his insightful account of ethnic identities, Barth (1969:15) suggested that it is the "boundary that defines the group, not the cultural stuff that it encloses" and urged researchers to pay attention to boundary dynamics. Building on Barth's insight, Hannan and Freeman (1989:57) postulated that segregating processes establish boundaries, whereas blending processes erode boundaries. Although Hannan and Freeman (1989:54–57) mentioned that technological factors and transaction costs may create boundaries, they singled out institutionally driven segregation as the most important process. Thus, in their view, nominal differences become transformed into real differences with social consequences through collective action, endorsement by powerful actors with the ability to impose sanctions, or taken-for-granted assumptions.

A canonical axiom in the social sciences is that categories establish social and symbolic boundaries, and thereby constitute the identity of actors (DiMaggio 1997; Douglas 1986; Mohr and Duquenne 1997; Tajfel and Turner 1979; Zerubavel 1997). More recently, a number of scholars have argued that strong categorical boundaries are a prerequisite for segregation, suggesting that categories entail a code of conduct enforced by critics who have the power to impose sanctions on code violators (Polos, Hannan, and Carroll 2002; Zuckerman 1999).

In a series of papers, Zuckerman and his collaborators argued that conformity to categorical imperatives is necessary lest members face role conflict, confuse critics, and receive penalties such as downgraded valuations. According to this line of reasoning, critics make judgments of similarity first, and then make judgments of taste (Phillips and Zuckerman 2001; Zuckerman 1999; Zuckerman et al. 2003). These arguments mesh well with accounts of how critics are third parties who establish evaluative frameworks (Becker 1991; Hirsch 1972). Carroll and Swaminathan (2000) showed that because craft brewers were defined as the antithesis of "industrial" beers, contract breweries that sourced beer from mass producers but sought to portray themselves as craft beers had lower vital rates than microbrews and brewpubs. Similarly, Zuckerman and Kim (2003) demonstrated that films classified as major films fared well in the mainstream market, but floundered in the art house market.

However, categorical boundaries can be undermined even in the case of oppositional category pairs. This is shown by the following studies of nonmarket contexts. Stein (1997:25) analyzed how feminists collectively contested the dominant meaning of lesbianism, and "reframed the meaning [of homosexuality], suggesting that the boundaries separating heterosexuality and homosexuality were in fact permeable." Other studies have depicted national borders as sites for creolization. Thus, accounts of the Mexican American border show that the division of individuals into opposing spheres such as "Mexican" or "American" has been replaced by mixed categories such as "Chicano," "Latino," and "Hispanic" (Gutiérrez 1999).

Even in the case of opposed category pairs, the "clarity of a set of boundaries is not a per-

manent property of a set of classifications. Rather, the realism of the distinction . . . depends on the degree of institutionalization that has occurred" (Hannan and Freeman 1989:57) and the strength of blending processes that undermine boundaries. Although Hannan and Freeman (1989:47–60) discussed random drift through replication errors and personnel turnover as sources of blending, they emphasized that unconstrained borrowing can erode boundaries between forms and, by implication, categories, unless constrained by segregating processes. Replication errors and personnel turnover are sources of random variation, in contrast to borrowing, which is deliberate. Moreover, replication errors and personnel turnover alter the frequencies of types, in contrast to borrowing, which fuels recombination and creates new subtypes (Axelrod and Cohen 2000:40–42). Actors can borrow routines, artifacts, and symbols from a rival category and innovatively recombine them with elements from their own category. A number of anthropologists suggest that individuals are bricoleurs who tinker, borrow, improvise, experiment, and recombine existing elements (Douglas 1986). This line of reasoning suggests that a system of categories and, more generally, "culture is not a unified system that pushes action in a consistent direction. Rather, it is more like a "toolkit . . . from which individuals select different pieces" (Swidler 1986:277).

Although recombination is widely depicted as a source of innovation, there is little research on how the borrowing of cultural elements from a rival category weakens boundaries. Carroll and Hannan (2000:67) noted that a code entails cognitive recognition and imperative standing and metaphorically referred to two dimensions: a blueprint containing a set of specifications and rules of conduct and penalties for violating them. To date, however, researchers have analyzed only the harmful consequences of crossing boundaries, thereby implying that penalties preserve the blueprint. They have devoted little attention to the processes that lead to the mixing of blueprints belonging to opposing categories. In this context, borrowing leads to crossover, and crossover, in turn, is a process of "recombining genetic contributions from two parents; . . . this mechanism creates novel types . . . by splicing together pieces of already available genetic material" (Axelrod and Cohen

2000:42). Thus, borrowing weakens the sharpness and resonance of the boundaries of the opposed category pair. Hence, this study examining the causes and consequences of borrowing enables us to understand how altered blueprints affect the operation of rules of conduct and the associated penalties for their violation.

For example, borrowing-based crossover weakened the boundaries that divided black and white music in the 1950s (White and White 1993:85–88). The domains of black and white music were segregated during the 1950s, but the boundaries were weakened by the movement of songs. Thus, black Americans had three musical streams—black popular, gospel, and blues/jazz—with an interlocking network of performers, audiences, and creators. White music too had three streams: disc jockey music or Tin Pan Alley, country and Western, and folk. The radio stations, recording companies, agents, critics, playing clubs, and performers for black music were segregated from white music. However, whites borrowed from blacks. Initially, songs moved over only after they had been resung and arranged according to the conventions of the white cluster. But soon, original recordings from the black cluster earned a place on the hit charts of the white cluster. These songs received attention from the outlets and networks in Memphis that were prominent in the black and white clusters. A consequence of such crossovers was a weakening of the boundaries between black and white music, as epitomized by Elvis Presley, and this process was fueled by disc jockeys, reaching a zenith with the rise of rock-and-roll.

BORROWING AND BOUNDARIES

Segregating processes dominate when the categories are opposed to each other and critics are likely to levy sanctions on any code violation. Therefore, most actors belonging to a category do not borrow from a rival category. The small number of actors who borrow are those who borrow most of the time. As a result, the mean number of elements (μ) borrowed from the rival category for each actor is likely to be low, whereas the variance (σ^2) in the number of elements borrowed is high. Conversely, when boundaries are eroding, the mean number of elements (μ) borrowed by an actor from the rival category

increases, but the variance (σ^2) in the number of elements borrowed declines. What increases μ and decreases σ^2 ? More formally, how does borrowing look when the boundaries of categories are strong?

An answer to the aforementioned questions requires us to address the issue of how borrowing is even possible when categorical boundaries are strong and members have to be authentic. A number of writers have pointed out that authenticity contains two meanings: authentic products and performances are (1) original and (2) credible representations of some cultural form (Fine 2004; Peterson 1997). Performers are assessed "in reviews by critics both in terms of known standards and in terms of originality and freshness of interpretation. It is exactly in this contradictory situation that there is room for coding to develop" (White and White 1993:10). In a related discussion, Peterson (1997:150–4) pointed out that one need not conform to all the conventions of a genre all the time; instead, what is important is to conform to some of the conventions most of the time. Hence, authenticity entails a tension between innovation and control, and presupposes a space for borrowing and crossover of materials. For example, country music has a number of conventions (appearance, vocalization, setting, and expressive control), yet neither John Denver nor Olivia Newton-John conformed to the conventions concerning appearance and expressive control, but still were recognized, respectively, as Country Music Entertainer of the Year in 1975 and Best Female Artist in 1974. Thus, "boundaries in social action are not given facts. . . . Boundaries are instead, subtle and complex products of action" (White 1992:127).

Put another way, a "boundary for a population is a theory . . . rather than some singular outcome," and "gets recognized from . . . a frequency of distribution of sets of social actions" (White and White 1993:103). What kinds of actions lead to the reshaping of boundaries? Becker (1978) contended that the definition of boundaries shifts over time according to the actions of influential actors. In particular, high-status actors can borrow from a rival category and depart from codes of conduct because their social acceptance is unquestioned. To be sure, low-status actors also can defy social conventions because they have little to lose and

are marginal (Phillips and Zuckerman 2001). However, borrowing by high-status actors is different in two respects.

First, the theory of the Matthew effect maintains that high-status actors not only receive more credit for doing tasks identical to those of lower status actors, but also are shielded from penalties (Podolny 1993). Consequently, high-status actors have leeway in how much they should conform to the conventions of a genre, and can innovate through cross-category borrowing and still be protected against accusations that they are not authentic.

Second, borrowing by high-status actors leads to emulation by others. A number of studies also indicate that high-status actors are more likely to be imitated because they are visible role models (Haunschild and Miner 1997; Strang and Soule 1998). Moreover, geographically proximate role models are more influential because they are more accessible and more available to a focal actor (Hedstrom 1994). Borrowing by geographically proximate high-status actors is the fodder of stories and, in turn, these "communicable speculations by actors of recurrent acts by others" (White 1992:127) trigger subsequent borrowing and reduce variance. Therefore, we test the following hypotheses:

Hypothesis 1: The more high-status actors borrow elements from a rival category in the prior year in a region, the higher is the mean number of elements borrowed in the focal year.

Hypothesis 2: The more high-status actors borrow elements from a rival category in the prior year in a region, the lower is the variance in the number of elements borrowed in the focal year.

BORROWING, CRITICS, AND PENALTIES

DiMaggio (1987:445–51) suggested that any system of categories has two significant properties: the hierarchical organization of categories and the symbolic potency of boundaries. Systems of categories vary in their hierarchical organization (DiMaggio 1987:447) because status is not only an attribute of individuals, but also an attribute of categories themselves (Jasso 2001). One line of argument is that the sharper the definition of a category, the greater are its claims to authenticity and categorical puri-

ty, and the higher is its standing and those of its members. Hybrid categories lack sharpness and suffer from lower standing (Carroll and Swaminathan 2000). However, sharp categorical boundaries also increase risks of contamination. When actors belonging to sharp and focused categories make claims to categorical purity, and yet borrow elements from a rival category, they run the risk of contaminating their identity. Although they are advantaged by virtue of belonging to a sharp and focused category, they have more to lose when their customary markers disappear and their identity is contaminated because of merger with another group (Liebersohn, Dumais, and Baumann 2000). Therefore, we test the following hypotheses:

Hypothesis 3a: The greater the claim to categorical purity, the less likely is a downgrade in external evaluations.

Hypothesis 3b: Those who claim categorical purity but borrow from a rival category are likely to receive a downgrade in external evaluations.

Boundaries are symbolically potent when work is classified into a few categories. In such cases, boundaries are easily defended. When boundaries are potent, conformity to the code of a conduct enables an actor to be perceived as authentic (Baron, 2004). In such cases, borrowing violates rules of conduct, triggering rejection from critics and consumers, and inviting downgrades in valuation (Polos, Hannan, and Carroll 2002; Zuckerman 1999; Zuckerman and Kim 2003). Therefore, see the following hypothesis:

Hypothesis 4: The greater the extent to which actors borrow elements from a rival category, the more likely is a downgrade in external evaluations.

However, boundaries are symbolically potent only when they are universally shared (DiMaggio 1987:449). Sanctions against borrowing are likely to decline as borrowing becomes more common in the social field for two related reasons. First, the greater the fraction of actors who borrow from a rival category and the more repeated the code violations, the weaker are defaults and the less severe are the critics' sanctions against borrowing (Polos, Hannan, and Carroll 2002). Sheer prevalence creates taken-for-granted understandings about

what is appropriate and legitimate (Scott 2001), and these understandings not only extend to critics, but also reshape their understanding of categorical boundaries. Thus, the borders of categories are porous, and the critic is an "ex-post teller of tales" (White and White 1993:57). Critics do not "impose upon but rather observe and dissect regularities in artworks" (White and White 1993: 60).

Second, widespread borrowing increases costs for critics—the costs of detecting violations and justifying penalties for critics. In this sense, the critic is a "flexible priest . . . bringing together artistic liturgies of celebration and accounting in new and flexible rhetorics" (White and White 1993:10). Therefore, we test the following hypothesis:

Hypothesis 5: The greater the number of actors who borrow elements from a rival category, the less likely is borrowing by a focal actor to lead to a downgrade in external evaluations.

FRENCH HAUTE CUISINE

We chose French haute cuisine as the setting for an investigation of the aforementioned hypotheses because, as mentioned earlier, it is the ultimate test case for understanding the salience of boundary issues. We first outline how French haute cuisine features two opposing categories, classical and nouvelle cuisine, each of which has an identifiable code of conduct and elements. Thereafter, we discuss the role of the *Guide Michelin*, a premier critic whose ratings define the identity of chefs, and whose guide has the widest circulation. Subsequently, we elaborate how the borrowing of techniques and ingredients was the mechanism of boundary breaching.

To gain a contextual understanding of French haute cuisine, we consulted a wide array of texts and interviewed a panel of experts. Specifically, we interviewed a dozen elite French chefs with one, two, or three stars. Some had lost a star, and some had gained a star. Some chefs worked in restaurants that included a complementary hotel service. Some belonged to the top-end luxurious voluntary chain Relais et Châteaux. Some had received prestigious trophies, titles, or distinctions. Some published cooking books on a regular basis, and some were members of the leading profes-

sional association in the field, the *Maîtres Cuisiniers de France*. We interviewed half a dozen culinary journalists and gastronomic critics, and half a dozen retired chefs and faculty members from culinary arts colleges. Finally, we had the privilege of interviewing three inspectors from the *Guide Michelin*, who, given the Secrecy Policy of the Michelin guide, chose to be anonymous.

CLASSICAL AND NOUVELLE CUISINE AS OPPOSING CODES

The origins of classical cuisine are traceable back to the French Revolution of 1789 (Ferguson 1998). However, it was not until the turn of the 20th century and George Auguste Escoffier's legacy that the Classical Cuisine was theorized. In his *Guide Culinaire* (1903), which remains a central text in the training of professional cooks even to the present day, Escoffier (1847–1935) conceived of classical cuisine as a codified grammar of culinary practice: *a product* can be *cooked* in different ways, *served* with different sauces, and *accompanied* with different fillings. Escoffier's guide was issued in several editions, and remained the dominant orthodoxy until it was undermined by the *nouvelle cuisine* movement.

In 1970, a group of young French chefs led by Paul Bocuse, Michel Guérard, the Troisgros brothers, and Alain Chapel invented a free-form style of cooking. The initial champions of *nouvelle cuisine* were young chefs who had to climb up the ladder of stardom and acquire sociopolitical legitimacy. Often, these activists were from the regions. Thus, Bocuse, Chapel, and the Troisgros brothers hailed from Lyon, Haerberlin was from Alsace, and so forth. Only Delaveyene among the early activists was from Paris. Culinary journalists such as Christian Gault and Henri Millau christened their style as *nouvelle cuisine*, codified it, postulated the Ten Commandments of *nouvelle cuisine*, and launched a culinary guide called *Gault–Millau*.

Ferguson (2004:106) noted that “cuisine, or culinary codes concerns production; its injunctions are largely instrumental; . . . gastronomy pertains to consumption.” Fischler (1993) described the codes of classical and *nouvelle cuisine* using five dimensions: culinary rhetoric, rules of cooking, archetypal ingredients,

role of the chef, and organization of the menu. Table 1 provides a summary.

In classical cuisine, the culinary rhetoric reveals the emphasis on conservatism and preservation. Often, dishes had the names of places, noblemen, or mythological characters associated with them (Neirinck and Poulain 1997). Moreover, cooking consisted of applying two specific rules and associated techniques: conformation to the rules formulated by Escoffier and sublimation of the ingredients such that the raw material is visually transformed. Fischler (1993:238) summarized it as follows: “The art of the cook consisted in accommodating, in transforming, in metamorphosing the raw material, to put it from Nature to Culture.” Classical cuisine used river fish, game, and cream sauces as staple ingredients. The chef lacked power and creative freedom, and it was the waiter who was more visible than the chef. The menus were long, and vision was the critical sense.

By contrast, the culinary rhetoric of *nouvelle cuisine* emphasized innovation, and the appellations dished referred to poetry and imagination rather than names of places or nobles (Weiss 2001:233–4). *Nouvelle cuisine* relied on the rules of transgression and acclimatization (Fischler 1993). *Transgression* consisted of using unconventional techniques: dishes mixing meat and fish, salads mixing vegetables and foie gras, or pot au feu featuring fish. *Acclimatization* was the importing of exotic foreign cuisine techniques and ingredients, notably from Japan and the former colonies of France (Beaugé 1999). The ingredients of *nouvelle cuisine* were fruits, vegetables, potatoes, aromatic herbs, exotic ingredients, and sea fish. In summary, “the object of the culinary arts is no more the metamorphosis of the food product, but the revelation of its essential truth” (Fischler 1993:238). *Nouvelle cuisine* used fruits and vegetables, placed the chef at the creative center of the enterprise, and required narrow menus.

THE RISE OF NOUVELLE CUISINE AS A RIVAL OF CLASSICAL CUISINE

Nouvelle cuisine arose as an identity movement that critiqued classical cuisine for its constraints on autonomy and offered a new logic and role identity emphasizing expanded auton-

Table 1. Category Types in French Gastronomy

	Classical Cuisine	Nouvelle Cuisine
Culinary Rhetoric	Names of dishes refer to rhetoric, memory, and legitimacy.	Appellations refer to poetry, imagination and evocation: Small ('petit'), Diminutives, 'émincé', 'allégé'. Symphonie, Trilogie, Menu, Assiette, etc.
Cooking Rules	<i>Conformation</i> = staying in conformity with Escoffier's principles (e.g., gratins and quenelles, terrines, pâtés, confits, jambons). <i>Sublimation</i> = sublimating the ingredients: brioches, croûtes, farces, chaussons, croustades, vol au vent, sauces, flambages, Chateaubriand.	<i>Transgression</i> = using old cooking techniques with new ingredients, or using old cooking techniques with old ingredients, yet for which these cooking techniques were not legitimate: mixing meat and fish, salad mixing vegetables and foie gras, Pot au feu with fish. <i>Acclimatization</i> = importing "exotic" foreign cuisine traditions, notably seasoning and spices: Fresh pasta, raviolis, cannelloni, cheesecake, carpaccio, risotto, tajine.
Archetypal Ingredients	High game, shellfish, cream, poultry, river fish.	Fruits, vegetables, potatoes, aromatic herbs, exotic ingredients, sea fish.
Chef Role	Restaurateur (rarely the owner, and never the cook) has power in rooms of luxury hotels and palaces. Classical service is organized through the saucepan. Waiters cut and serve dishes, blaze preparations. Rituals are outside the plate.	Chef is at center of operations. Since "service à la japonaise" (service through the plate and service under a "cloche") waiters no more intervene in process.
Menu Organization	Extremely long menu, almost all classical dishes are registered. Need for large inventories, hence less freshness. Consuming is a long ceremony. Related art is <i>Architecture</i> (three dimensions). Relief and contours are important. One sense is critical: vision.	Very narrow menu. No inventories to increase freshness. Consuming is a shorter ceremony. Related art is <i>Painting</i> (two dimensions): service through the plate leads cooks to add products only for esthetical reasons. Colors, contrasts, and decoration, and the five senses are important

omy. Nouvelle cuisine's growth as a high-status rival of classical cuisine was fueled by the growing sociopolitical legitimacy that nouvelle cuisine activists derived from their expanding positions in the professional society of French chefs (Maîtres Cuisiniers de France), and by journalists who played the role of theorists, codified the practices of nouvelle cuisine activists, celebrated conversion stories, gave visibility to defectors from classical to nouvelle cuisine, and fostered a shared symbolic environment for chefs and the public to appreciate nouvelle cuisine. The defections of peers from classical cuisine to nouvelle cuisine and the gains that accrued to prior defectors fueled further nouvelle cuisine (Rao, Monin, and Durand 2003).

The abandonment of classical cuisine for nouvelle cuisine was not a binary process in which chefs changed overnight from one cuisine to another by replacing all three of their classical cuisine signature dishes with three nouvelle

cuisine signature dishes. Such wholesale defections were risky because they entailed an abrupt change in identity and imposed severe coordination costs. Predictably, such wholesale defection was rare. Instead, chefs resorted to partial defection, changing their dishes over time or including at least one nouvelle signature dish in their repertoire of three signature dishes. By 1986, 50 percent of all chefs had one or more nouvelle cuisine dishes in their repertoire of three signature dishes (Rao, Monin, and Durand 2003).

BORROWING OF ELEMENTS FROM THE RIVAL CATEGORY

In contrast to partial defection, chefs also could borrow techniques from the rival cuisine. Such acquisition of techniques from the rival cuisine allowed chefs to become optimally distinctive (Brewer 1991), that is, to belong to a social

order and yet stand out within that social order. Moreover, borrowing was less disruptive than changing signature dishes, and it also allowed chefs to be innovative.

Classical cuisine and nouvelle cuisine were not rigid orthodoxies, but theories that could be appropriated by chefs (Ferguson 2004). Indeed, culinary journalists such as Henri Gault and Christian Millau depicted Escoffier and classical cuisine as rigid, and portrayed nouvelle as an oppositional category. In this sense, the nouvelle cuisine was created more in the press-room and less in the kitchens. However, our informants emphasized that chefs blended cooking techniques from rival cuisines and breached the boundaries of culinary categories to be innovative.

Chefs could follow six options. First, chefs could adhere to the norms of classical cuisine by using only the cooking techniques and ingredients associated with that category. Second, chefs could scrupulously conform to the cooking techniques and ingredients of nouvelle cuisine. Third, chefs could signal a hybrid identity—two of the signature dishes could belong to classical (or nouvelle) genre, with the remaining dish in the nouvelle (or classical) genre. In all cases, the signature dishes adhered to the rules of the genre, so patrons could have a choice of classical and nouvelle cuisine dishes faithfully executed according to the conventions of the genre. Fourth, a chef's signature dishes could be in the classical category and yet borrow elements from nouvelle cuisine. Fifth, a chef's signature dishes could be in the nouvelle category and yet draw on elements from classical cuisine. Finally, chefs could follow a hybrid approach (two of their signature dishes falling in one genre and the remaining dish falling in the other genre), with the dishes in each cuisine borrowing techniques from a rival cuisine.

GUIDE MICHELIN AS A CRITIC

Haute cuisine restaurants are subjected to a very different process of social control than other casual dining establishments such as the fast food joint, the bouchon, the bistro, or, for that matter, the brasserie. In the case of haute cuisine restaurants, critics and their texts mediate the relationship between consumers and producers. These critics, as Ferguson (2004:17) aptly noted, are concerned with “the imposi-

tion of form to regulate the individual appetite” and contribute to the “intellectualization and aesthetization that counter the materiality and ephemerality of food.” The critics thereby help to “make a private experience into a *public order*” (italics ours). Moreover, the texts produced by the critics on haute cuisine restaurants are avidly read by the consumers: “Whereas food calls for eaters, a culinary culture contends with a different sort of consumer, the reader-diners whose consumption of texts rivals their ingestion of food” (Ferguson 2004:17). Such criticism provides a literary and rhetorical foundation for cuisine and gastronomy.

In French haute cuisine, the *Guide Michelin* is the most influential critic, outstripping *Gault-Millau* in circulation and standing among the chefs and readers. The anonymous inspectors are full-time Michelin employees. They do not specialize by cuisine type, are regularly rotated so as not to return to the same establishment for several years, and receive a significant culinary training. One informant summarized the role of training as follows: “You need to taste truffles 30 times to assess whether a chef cooks it well. Training in tasting truffles is a key to tell whether a chef cooks truffles well. The sensorial experience is important, as well as the ability to express one's feelings. Many people can taste but cannot verbalize what they feel. Culinary critic gets closer to oenology and wine tasting.”

Our interviews with the inspectors of the *Guide Michelin* showed that the evaluation proceeds in two stages: classification and then judgment of taste. The *Guide Michelin* asks chefs to nominate three “signature dishes” that telegraph the style of cooking done in the restaurant, and requires that these dishes be served regularly to customers. Interviews with our panel of experts revealed that the three “signature dishes” nominated by each elite chef to the *Guide Michelin* were markers that conveyed the identity of the chefs to external critics such as *Guide Michelin* inspectors.

The *Guide Michelin* confers a maximum of three stars to a restaurant. One star means that a restaurant has a good table; two stars imply that a restaurant is worth a detour; and three stars are reserved for restaurants worth a special journey. When asked as to whether surroundings influenced the number of stars, one informant

emphatically asserted: "Journalists may take into account the ambiance and surroundings, the atmosphere, and these elements can compensate for the plate. We DON'T. Only the quality of the plate counts." The *Guide Michelin* does not provide reasons for downgrades, and one of the inspectors characterized it as a "silent critique." For chefs, the loss of a star is a source of personal anguish and pain, and a blow to their identity. Marc Menneau, who lost one of his three stars, once spoke about "mourning for a child."

BORROWING OF ELEMENTS AND GUIDE MICHELIN

Our interviews with inspectors and other informants indicated that borrowing of elements posed new challenges. One inspector said, "Before, we had our scale, the respect to Escoffier. We could tell how a Tournedos Rossini should be done. Now it requires even more discernment. We have to think more, it is more uncertain; . . . since variety is increasing, it is difficult to perceive the chef's potential." Other informants were of the view that widespread borrowing had redefined the understanding of critics, and one observer pointed out the new challenges that critics face: "It seems that critiques converge toward homogeneous judgments, since they do not have a codified body of expertise any more (with blurred boundaries and nouvelle cuisine). . . . Critics themselves need to be legitimized by . . . chefs and therefore adapt to their tastes and preferences."

DATA AND METHODS

Our panel of interviewees suggested that haute cuisine restaurants were those that merited inclusion in the *Guide Michelin*—the most comprehensive, authoritative and widely disseminated guide in which experts rank chefs (Ferguson 1998). We restricted our attention to haute cuisine restaurants. First, as mentioned earlier, the categories of classical cuisine and nouvelle cuisine apply to elite haute cuisine restaurants rather than casual dining establishments. Second, haute cuisine restaurants have critics who intellectualize and formalize cuisine for the reader-diner. Third, the *Guide Michelin* is not identified with classical or nouvelle cuisine, and its ratings are the most influential in France.

By contrast, *Gault-Millau* favors nouvelle cuisine; its authors played a role in the construction of nouvelle cuisine. Fourth, the *Guide Michelin* is the only culinary guide that provides details about chef-nominated signature dishes. Signature dishes are not nominated only with the evaluator in mind, but also have to be served to customers as part of regular business. Finally, in relying on evaluations from one critic, we also follow another study by Benjamin and Podolny (1999), who also relied on ratings from one industry guide.

We started our window of observation in 1970 when the nouvelle cuisine movement appeared on the culinary landscape. We ended our window of observation in 1997 because by then the logic of nouvelle cuisine was being breached by two trends: the growth of cuisine sous contrat and cuisine rassurante. Under cuisine sous contrat, the chef and owners (using hospitality firms) have a written and explicit contract in which both cooperate to develop the company's image. The cuisine sous contrat system lightens the burden of the chefs in significant ways. They are no more required to be profitable, losses being expected and compensated for with related gambling or hospitality businesses. In parallel, some chefs who had worked in high-status three-starred restaurants also led a renegade movement, wherein they wanted to make "comfort food" or cuisine rassurante in less ostentatious surroundings.

CHEF-RESTAURANT DYAD YEAR AS THE UNIT OF OBSERVATION

Although our interest was in how the culinary categories of chefs shaped their status, we also were sensitive to how chefs were embedded in restaurants. On the one hand, chefs embodied the culinary model of the restaurant, whereas on the other, restaurants were the vehicle by which these culinary models were expressed. Our panel of experts suggested that the appropriate unit of analysis was the chef-restaurant dyad because elite chefs decide on the choice of cuisine, and also move from one restaurant to another. Accordingly, our dataset consisted of chef-restaurant dyad years.

The *Guide Michelin*'s policy is that when an existing chef moves from an origin restaurant to a destination restaurant, the origin restaurant gets to keep its number of star(s), but the next

year, the number of stars is adjusted on the basis of new visits by its anonymous inspectors. The new chef either maintains the rank, or the restaurant gets regraded. A similar policy applies to the destination restaurant. It retains its previous number of stars, if any, and then is evaluated afresh in the next year and regraded. This policy reduces the risk of a downgrade because of a poor initial match between a chef and a restaurant. In the following discussion, we define the dependent and independent variables used to test the hypotheses, as well as the control variables used in our analyses of the causes of borrowing and the effects of borrowing on downgrades.

ANTECEDENTS OF BORROWING (HYPOTHESES 1 AND 2)

To test Hypothesis 1, we used the count for the number of techniques borrowed from a rival cuisine. Hypothesis 2 was tested with the variance in the number of techniques borrowed from a rival cuisine. In both cases, we chose to focus on techniques rather than ingredients because the former are sharply defined carriers of cultural material (Scott 2001). By contrast, ingredients are weaker cultural markers. Accordingly, the number of techniques borrowed was defined as the number of classical techniques used to make a nouvelle signature dish, or the number of nouvelle techniques used in making a classical signature dish. We aggregated these dish-based counts by chef–restaurant dyad for each year.

The number of geographically proximate high-status borrowers was computed as follows. We defined high-status borrowers as those who had one or more stars, had not experienced a downgrade in their careers, and hence had consistent standing and were in the same region as the focal chef–restaurant dyad. For each year, we summed the number of such actors and multiplied them by the number of stars and the number of techniques they borrowed from a rival category. We did so to account for the fact that borrowing by a three-star chef was more consequential than borrowing by a one-star chef. This count was logged and lagged by a year.

We sought to control for a number of other influences on the antecedents of borrowing. We distinguished between categorical purists (those whose signature dishes were all-nouvelle or all-

classical) and straddlers who had signature dishes in both categories. A chef was classified as all-nouvelle when all three signature dishes were in the nouvelle cuisine category. Analogously, a chef was classified as all-classical when all three signature dishes were in the classical cuisine category. The hybrid category consisting of those who distributed their signature dishes across nouvelle and classical cuisines was defined as the reference category (see the next section for more details about the construction of this variable). We controlled for the tenure of a chef in a restaurant to discern whether newer chefs tended to borrow more than older chefs, and logged and lagged the variable. We controlled for the resources of restaurants. Because restaurants are privately owned, it was not possible to gather data on annual sales or profits. We therefore used the number of rooms attached to the restaurant as a proxy for resource availability, logging this variable because of its skewness and lagging it by a year. Because chefs in large cities are more likely to have access to information, we created a variable termed “distance to Paris” (measured in kilometers) to account for location. This variable also was lagged by a year and rescaled by 1,000. Higher-priced restaurants usually are more likely to engage in experimentation, so we gathered data on the price of a prix fix menu, but divided it by 1,000 and lagged it by a year.

Perceived skill was measured through the conferral of the *un des Meilleurs Ouvriers de France* award (MOF, or “One of the Best Craftsmen of France”). We coded this through a dummy variable set to 1 after the award and lagged by a year. We also included as controls the prior number of downgrades, the prior number of upgrades experienced by a chef–restaurant dyad, the prior number of stars, and the cumulative number of changes made by the chef–restaurant dyad. Each of these variables was lagged by a year. Details of correlations among the variables are available on the Online Supplement (see Table S1 on the *ASR* Online Supplement: <http://www2.asanet.org/journals/asr/2005/toc048.html>).

To test our predictions about the mean number of techniques borrowed and variance in the techniques borrowed, we used the generalized negative binomial regression model, which allowed us simultaneously to model heterogeneity in the mean and heterogeneity in the

variance parameter. The baseline model for event count data is the well-known Poisson process, which presumes that the mean of yearly counts is equal to the variance, but because the variance in the series of yearly counts is likely to exceed its mean and create overdispersion, the negative binomial regression model is used. Here, the expected count $E(Y) = \mu t$, and, in turn,

$$\mu t = \exp(\beta x t),$$

where β is a vector of coefficients, and x is a vector of independent variables measured at time t . The generalized event count model also allows the variance of the event count to be a function of a set of covariates such that $\sigma^2 = \exp(\gamma x t)$, where γ is a vector of coefficients, and x is a vector of independent variables measured at time t .

Because our dataset consisted of chef–restaurant dyad years, there was within-cluster dependence of yearly observations, and we used a robust estimator or Huber–White sandwich estimator to obtain the results. We used the `gnbreg` routine in STATA 8.0 to estimate our models.

CONSEQUENCES OF BORROWING (HYPOTHESES 3 TO 5)

To test Hypotheses 3 to 5, we used the rate of downgrade as the dependent variable. The *Guide Michelin* awards stars ranging from zero to three to restaurants, and a downgrade was defined as a reduction in stars compared with the previous year's rating. The dependent variable was the instantaneous hazard rate of downgrade, defined as

$$r(t) = \lim_{dt \downarrow 0} \frac{\Pr[t \leq T < t + dt, \mid T \geq t]}{dt}$$

where $r(t)$ is the hazard rate of a downgrade at time t , and $\Pr[\cdot]$ is the probability of a downgrade occurring between times t and $t + dt$.

To test Hypothesis 3a and 3b, we distinguished chefs on the basis of their categorical purity. Accordingly, a chef was classified as an all-classical nonborrower when all three signature dishes were in the classical cuisine category and the chef did not borrow any techniques from the nouvelle category. Analogously, an all-nouvelle nonborrower was defined as a chef with all three signature dishes in the nouvelle

cuisine category who did not borrow any techniques from the classical category. All-nouvelle borrowers were those who had three nouvelle signature dishes, but borrowed one or more techniques from classical cuisine. All-classical borrowers were chefs who had three nouvelle signature dishes, but borrowed one or more techniques from nouvelle cuisine. Hybrid borrowers were chefs who distributed their signature dishes across nouvelle and classical cuisines and borrowed techniques. Finally, hybrid nonborrowers were those who spread their signature dishes across both cuisines, but did not borrow any techniques when making the signature dish. They were the reference category. Our expectation for Hypothesis 3a was that all-classical and all-nouvelle nonborrowers would have lower hazards of a downgrade, and our expectation for Hypothesis 3b was that all-classical and all-nouvelle borrowers would have higher hazards of downgrade, as compared with the reference category.

We coded signature dishes according to the rules of classical and nouvelle cuisines, as stated in Fischler (1993) and Neirinck and Poulain (1997). We designed a computer program to code signature dishes (during our period) in terms of whether they fell into classical or nouvelle cuisine. A signature dish was classified as classical or nouvelle cuisine when it met the following criteria. The name of the dish had to fit with the culinary rhetoric of the cuisine: more than half of the ingredients had to be from the category, and more than half of the cooking techniques also had to be from the category. We then extracted a random sample of 400 dishes and asked two experts to code these signature dishes into the classical and nouvelle categories. The raters did not know each other, and the interrater reliability was 95 percent. We also estimated the match between the ratings of the raters and those of the computer program, and found a 95 percent degree of reliability, so we used our computer-generated coding of chef–restaurant dyads.

To test Hypothesis 4, the number of techniques borrowed by the focal actor was defined as the number of nouvelle cuisine techniques used to make a classical signature dish, and vice versa. The dish-based counts were aggregated by chef–restaurant dyad and lagged by a year.

To test Hypothesis 5, we computed the proportion of chefs who had borrowed techniques from a rival category in France every year, log-

ging and lagging it by a year. A chef was defined as blending techniques when at least one signature dish used techniques from classical and nouvelle cuisines. We summed the number of such chefs who blended cuisines and divided them by the total number of chefs. We theorized that unlike chefs influenced by high-status actors, critics are likely to be influenced by the sheer prevalence of borrowing on a national basis, especially given the rotation of inspectors across restaurants and regions.

We used tenure, number of rooms, location, price, MOF, prior downgrades, prior upgrades, and prior stars as controls. Additionally, we accounted for explanations rooted in structural inertia. Models of structural inertia suggest that changes in the organizational core can recreate liabilities of newness and undermine external evaluations (Carroll and Hannan 2000; Hannan and Freeman 1989). Following Barnett and Carroll (1995), we distinguished between the content and process effects of changes. We defined a content change as a change in the signature dish by a chef and coded it as a dummy variable set to 1 in the year of change, which remained set to 1 thereafter. To get at the process effects of change, we created a measure of time elapsed since change, and also had an interaction term: content change \times age of the chef–restaurant dyad. Here, we used the tenure of the chef in a restaurant rather than the age of the restaurant because our panel of experts felt that organizations went through a rebirthing process, frequently importing new staff when a new chef arrived. We also created a counter for the cumulative number of changes in signature dishes undertaken by the chef–restaurant dyad. Information on the correlations among these variables are available on the Online Supplement (see Table S2 on the *ASR* Online Supplement: <http://www2.asanet.org/journals/asr/2005/toc048.html>).

When modeling the hazard of a downgrade, we used the Weibull specification of the hazard:

$$h_i(t) = \lambda \alpha (\tau)^{\alpha-1},$$

where λ is the scale parameter depending upon a vector of coefficients and independent variables, and α is the shape parameter, with the hazard increasing when α exceeds 1. Because our dataset consisted of chef–restaurant dyad years, there was within-cluster dependence of yearly observations, and we used a robust esti-

mator or Huber–White sandwich estimator to obtain the results. We used the *streg* routine in STATA 8.0 to estimate our models. It also enabled us to account for the right censoring of observations.

RESULTS

Table 2 presents the results from our analyses of the causes for borrowing. We assessed whether our control and independent variables exerted different effects on the mean (μ) count and variance (σ^2) in the count of techniques borrowed. Model 1 shows that the number of prior stars received had no effect on the mean and variance in techniques borrowed by a chef–restaurant dyad. However, prior upgrades significantly increased mean borrowing, but had insignificant effects on the variance. Prior downgrades significantly diminished mean borrowing. Price significantly reduced mean borrowing and increased variance. Perceived skill (MOF dummy) and the number of rooms had a negligible effect. Prior cumulative changes in signature dishes increased mean borrowing, but also reduced variance in techniques borrowed. All-classical chefs borrowed less, and this also increased variance. By contrast, all-nouvelle chefs borrowed more, and this dummy significantly reduced variance. Chef tenure had no effect on mean borrowing, but reduced variance in borrowing. High-status borrowers in the same region as the focal chef–restaurant dyad significantly increased mean borrowing and significantly decreased variance in techniques borrowed from the rival category. Thus, there was support for Hypotheses 1 and 2.¹

Models 2 to 4 present results disaggregated by cuisine. Model 2 relates to those whose signature dishes all belonged to classical cuisine. Prior upgrades and downgrades had no significant effects, and price had effects similar to those observed with Model 1. Classical cuisine restaurants affiliated with hotels and having rooms, and those farther from Paris borrowed less. High-status borrowers in the same region as the focal chef–restaurant dyad significantly enhanced mean borrowing and reduced variance in tech-

¹ In unreported analyses, we also added an industry clock, but found a similar pattern of support for Hypotheses 1 and 2.

Table 2. Antecedents of Borrowing: Generalized Negative Binomial Regression Estimates

Vector	Variable	Model 1	Model 2 (Classical)	Model 3 (Nouvelle)	Model 4 (Hybrid)
μ	Prior stars	.03 (.04)	.02 (.13)	.09 (.10)	.02 (.04)
	Prior Upgrades	.11*** (.03)	.19 (.13)	-.001 (.07)	.13*** (.04)
	Prior Downgrades	-.11** (.04)	-.25 (.13)	.04 (.08)	-.14*** (.05)
	Price/1000	-.02* (.01)	-.01** (.004)	-.03 (.02)	-.01 (.01)
	Number of rooms	-.01 (.01)	-.11** (.03)	.01 (.02)	-.01 (.01)
	Location/1000	.03 (.06)	-.06*** (.01)	.02* (.01)	.03 (.06)
	Cumulative Change	.02*** (.009)	.12** (.02)	.01 (.01)	.02* (.01)
	MOF award	.09 (.07)	.02 (.23)	.03 (.14)	.10 (.07)
	All Classical	-.82*** (.05)	—	—	—
	All Nouvelle	.40*** (.03)	—	—	—
	Chef Tenure	.03 (.03)	-.04 (.08)	.13* (.06)	.01 (.03)
	High Status Borrowers ^a	.04*** (.01)	.13*** (.03)	.03 (.02)	.03** (.01)
σ^2	Prior stars	.06 (.06)	-.02 (.16)	.20 (.13)	.06 (.07)
	Prior Upgrades	-.07 (.06)	-.10 (.21)	-.31* (.14)	-.04 (.08)
	Prior Downgrades	-.08 (.09)	-.06 (.21)	-.15 (.18)	-.09 (.12)
	Price/1000	.06** (.02)	.02*** (.001)	.06 (.06)	.03 (.03)
	Number of rooms	.01 (.02)	.12** (.04)	.01 (.04)	.01 (.02)
	Location/1000	-.008 (.01)	-.03 (.02)	-.02 (.02)	-.01 (.01)
	Cumulative Change	-.02* (.01)	-.10 (.04)	-.01 (.03)	-.01 (.02)
	MOF award	-.20 (.13)	-.31 (.26)	-.22 (.25)	-.15 (.17)
	All Classical	1.21*** (.07)	—	—	—
	All Nouvelle	-.38*** (.07)	—	—	—
	Chef Tenure	-.09* (.05)	-.23* (.10)	-.15 (.13)	-.07 (.06)
	High Status Borrowers ^a	-.04* (.02)	-.15** (.05)	.001 (.06)	-.03 (.02)
	Spells	15689	3701	1770	10218
	Degrees of freedom	12	10	10	10
	Wald χ^2	511.67***	120.1***	15.0	47.2***

Note: Data in parentheses are robust standard errors of estimates. Constant has been omitted. All χ^2 tests are based on a baseline model with no covariates. MOF award = *un des Meilleurs Ouvriers de France* award (One of the Best Craftsmen of France).

^a Number of geographically proximate high status borrowers.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

niques borrowed from the rival category. Thus, there continued to be support for Hypotheses 1 and 2.

Model 3 pertains to those whose signature dishes all belonged to *nouvelle cuisine*. Interestingly, those farther away from Paris borrowed more, but the effects of high-status borrowers on mean borrowing and variance in borrowing was not significant. The model does not improve significantly over a baseline model.

Model 4 concerns those chefs who had hybrid cuisines. At least one of their dishes belonged to classical (*nouvelle*) cuisine, and two other dishes were from *nouvelle* (classical) cuisine. The results are roughly similar to those obtained with Model 1, but with one key difference: high-status borrowers increased mean borrowing by a hybrid chef, but did not reduce variance. In short, Models 2 to 4 indicate that emulation-led borrowing weakened boundaries more for classical cuisine than for hybrid cuisines, but not for *nouvelle cuisine*.

Table 3 displays the results obtained from our analyses of the effects that borrowing had on the hazard of downgrade. Model 5 shows that the risk of a downgrade increased with chef tenure because the age parameter was greater than 1. Therefore, downgrades were not the outcome of poor matching between new chefs and restaurants. Those who received prior downgrades were likely to have a significantly higher hazard of a downgrade, but those who received a prior upgrade and possessed an MOF award had a significantly lower risk of a downgrade. The greater the number of stars received in the previous year, the higher was the hazard of a downgrade. Price, rooms, location, and the change dummy had insignificant effects. However, prior cumulative changes significantly lowered the hazard of a downgrade, thereby indicating that innovation in signature dishes was useful for chefs.

Model 5 provides an opportunity to evaluate whether there was support for Hypothesis 3a and 3b. *Nouvelle* nonborrowers had the lowest risk of a downgrade. Thus, there was partial support for Hypothesis 3a, which asserts that the greater the categorical purity, the lower the risk of a downgrade. But neither all-classical borrowers nor all-*nouvelle* borrowers had higher risks of a downgrade. Thus, there was no support for Hypothesis 3b. Model 5 also includes the number of techniques borrowed, and this sig-

nificantly increased the risk of a downgrade. Thus, there was support for Hypothesis 4, which holds that borrowing leads to penalties.

Model 6 includes the effect of proportion of chefs who borrowed and interacts it with the total number of techniques borrowed by the focal chef–restaurant dyad. The interaction was significant and negative, indicating support for Hypothesis 5, which maintains that penalties for borrowing are lowered when borrowing becomes pervasive.

Models 7 to 9 present results disaggregated by type of cuisine to discern whether the costs of borrowing varied by type of cuisine. Model 7 concerns chefs whose three signature dishes belonged to classical cuisine. Here, because the sample included only all-classical restaurants, we included only the all-classical nonborrower dummy and treated all-classical borrowers as the reference category. The dummy was insignificant. The number of techniques borrowed had a positive effect on the downgrade, but is not significant. Borrowing by other chefs did not significantly lower the penalty of a downgrade for the focal chef.

Model 8 pertains to chefs with all three signature dishes in the *nouvelle cuisine* category. Because the sample included only all-*nouvelle* restaurants, we included only the all-*nouvelle* nonborrower dummy and treated all-*nouvelle* borrowers as the reference category. The dummy was significant and negative. The number of techniques borrowed had an insignificant effect on the downgrade, and the interaction term (borrowing \times proportion of chefs who borrow) was insignificant.

Model 9 is based on a sample of chefs with hybrid identities: at least one of their dishes belonged to classical (*nouvelle*) cuisine, and two other dishes were from *nouvelle* (classical) cuisine. Because the sample included only hybrid restaurants, we included only the hybrid borrower dummy and treated hybrid nonborrowers as the reference category. The dummy was insignificant. The number of techniques borrowed significantly increased the hazard of a downgrade, but this declined as the proportion of chefs who borrowed increased. Thus, Models 7 to 9 imply that the costs of borrowing befell hybrid identity chefs, and that penalties declined for hybrid chefs as the proportion of borrowers increased.

Table 3. Weibull Hazard Rate Models of Downgrades

Variables	Model 5	Model 6	Model 7 (Classical)	Model 8 (Nouvelle)	Model 9 (Hybrid)
Prior Stars	1.76*** (.16)	1.74*** (.16)	2.5*** (.28)	2.5*** (.40)	1.6*** (.17)
Prior Upgrade	-.89*** (.22)	-.86*** (.22)	-.35 (.50)	-.92** (.46)	-1.04*** (.30)
Prior Downgrade	2.68*** (.19)	2.69*** (.19)	2.5** (.28)	3.1*** (.46)	2.7*** (.20)
Price/1000	.01 (.08)	.01 (.08)	.005 (.05)	.01 (.04)	.01 (.01)
# of rooms	.07 (.07)	.06 (.07)	.06 (.07)	.14 (.20)	.05 (.09)
Location/1000	-.02 (.03)	-.02 (.03)	.07 (.20)	-.06 (.10)	-.02 (.05)
MOF award	-1.58*** (.63)	-1.58** (.63)	-18.1** (1.1)	.59 (1.0)	-1.7** (.66)
Change	.59 (.54)	.59 (.54)	3.1*** (.86)	-1.6 (1.6)	.19 (.86)
Time since last change	-.02 (.10)	-.03 (.10)	.11 (.12)	.21 (.28)	-.03 (.10)
Change \times Age	-.40* (.24)	-.41* (.24)	-1.6*** (.44)	.28 (.85)	-.04 (.38)
Cumulative Changes	-.10* (.04)	-.09* (.04)	-.35* (.15)	-.07 (.21)	-.09* (.05)
All-classical Non-B	-.06 (.35)	-.06 (.35)	-.28 (.80)	—	—
All-Nouvelle Non-B	-12.7*** (.26)	-12.7*** (.26)	—	-15.60*** (.65)	—
All-classical Borrower	.21 (.45)	.21 (.45)	—	—	—
All-Nouvelle Borrower	.24 (.35)	.24 (.35)	—	—	—
Hybrid Borrower	-.01 (.24)	-.01 (.24)	—	—	-.02 (.25)
No. of techniques borrowed	.06* (.03)	1.3* (.58)	4.5 (3.0)	-.15 (1.9)	2.1* (.91)
Proportion who blend	—	.36 (4.3)	-5.1 (11.6)	-3.1 (26.8)	3.9 (4.5)
Blend \times Borrowed ^a	—	-2.04* (.96)	-7.3 (5.2)	-.33 (3.3)	-3.3* (1.4)
Age parameter	1.29*** (.09)	1.27*** (.09)	1.47*** (.22)	1.74*** (.39)	1.28*** (.12)
Spells	15689	15689	3701	1770	10218
Degrees of Freedom	17	19	15	15	15
Wald χ^2	6205.14***	6273.87***	625.70***	3862.7***	397.71***

Note: Data in parentheses are robust standard errors of estimates. Constant has been omitted. All χ^2 tests are based on a baseline model with no covariates. MOF award = *un des Meilleurs Ouvriers de France* award (One of the Best Craftsmen of France); Non-B = non-borrower.

^a Proportion of chefs who blend multiplied by number of techniques borrowed.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

ROBUSTNESS CHECKS

We conducted a number of robustness checks to account for the stability of our results and report only the most salient results for the sake of brevity. An alternative approach is to focus on the choice of signature dishes. Eroding boundaries imply that chefs straddled between classical and nouvelle cuisine by their very choice of signature dishes. Readers can ask whether the distribution of signature dishes into classical and nouvelle categories is different from one obtained by chance for each year of our observation. An implication is that one can generate a random distribution of signature dishes across chefs for each year and see whether the observed distribution is different from the random distribution. Although less theoretical in comparison with our own strategy, this approach allowed us to distinguish between periods in which the observed distribution was different from the random distribution (period of strong boundaries) and periods in which the observed distribution was not different from the random distribution (weak boundaries).

We assumed that every year, each chef was drawing signature dishes from a large number of potential dishes, and likened it to a process of choosing balls from an urn. A chef was therefore drawing from an urn with a very large number of balls that were either classical or nouvelle. Because a chef could draw only three signature dishes each year, strong boundaries meant that chefs were either committed to classical and drew no nouvelle dishes or committed to nouvelle and drew three nouvelle dishes. A committed classical chef who drew a nouvelle dish, threw it away and drew again, and vice versa for a committed nouvelle chef. Hybrid chefs kept a nouvelle or classical dish.

In this case, we are in the world of binomial draws (at least very nearly because many draws are nearly the same as replacing the ball after each draw), and we can use the binomial formula to generate a random distribution of chefs each year and compare it with the observed distribution for that year. But generating one random sample for each year may not be sufficient, so we generated 100 such random samples each year and compared them with the observed distribution each year. We used the unmatched Wilcoxon test because it is assumption free and performed well given the ordinal nature of our

data (0–3 signature dishes, with 0 being all classical, 3 being all nouvelle, and intermediate states being hybrids).

Figure 1 shows the number of times (out of 100) that the observed distribution was substantially different from the binomial distribution for each year. Early on, the differences were acute, but they declined, thereby indicating a weakening of boundaries. A low was touched in 1983, but then from the late 1980s onward, especially, the observed distribution was different from the random distribution less than 50 percent of the time each year. We used a stringent condition to determine the era of weakening boundaries, namely, that the observed distribution had to be different from the random distribution for three consecutive previous years. By this criterion, 1988 was the cutoff point. This pattern fit with our interviews. Our informants suggested that mixing became more rampant during the later part of the 1980s. Francois Simon, a journalist, described it as “the period of synthesis through the technique,” and another *Michelin* inspector said that the rule of transgression had become squared, with the result that boundaries were becoming more ambiguous.

We constructed a year dummy to account for the period effect since 1988 and undertook several analyses. Table 4 provides the results of these analyses. We logged the number of techniques to discern whether initial increases undermined ratings more than subsequent increases. Model 10 concerns downgrades in the until-1988 sample and shows that all-nouvelle nonborrowers had the lowest risk of a downgrade. The log of the total number of techniques borrowed significantly increased downgrades, so there is evidence of strong boundaries before 1988. Model 11 studies downgrades in the post-1988 sample and finds that all-nouvelle nonborrowers once again had the lowest risk of a downgrade. The effect of the number of techniques borrowed is not significantly different from zero. However, the question is whether there is a difference between the pre-1988 coefficient and the post-1988 coefficient. Model 12 pools all observations together, introduces a dummy variable set to 1 for all observations until 1988 and 0 thereafter, and interacts the period dummy with the number of techniques borrowed. The interaction term is significant and positive, thereby indicating that borrowing

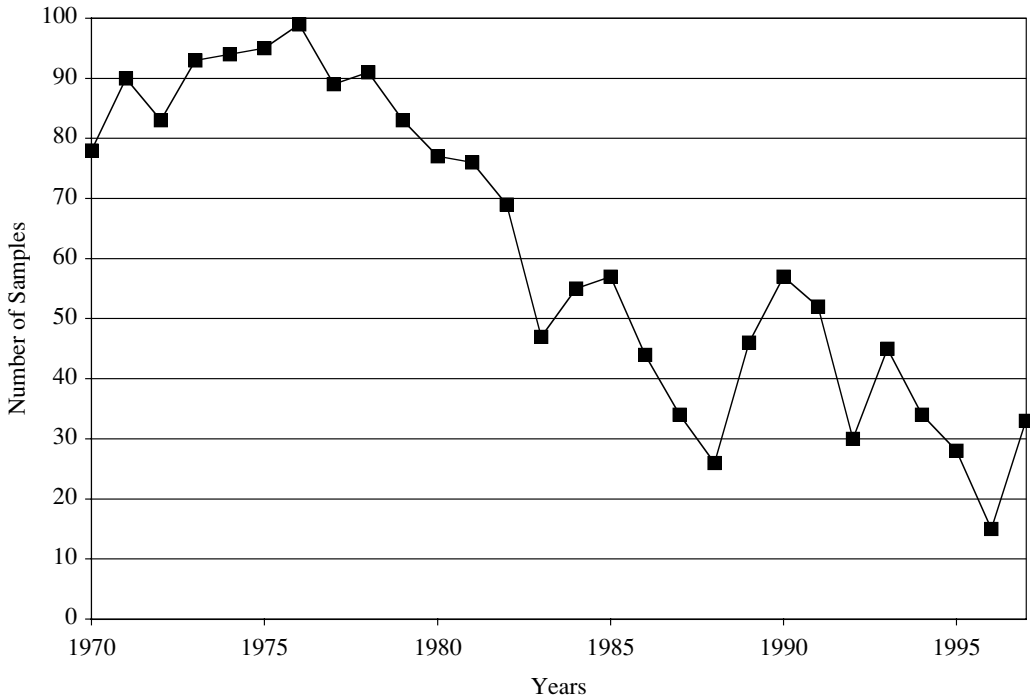


Figure 1. Number of Samples (out of 100) Different from Binomial Distribution

increased downgrades more in the period until 1988 than after 1988. Thus, boundaries weakened after 1988.

We then turned to upgrades. Model 13 shows that in the until-1988 sample, all-nouvelle non-borrowers also had the highest risk of upgrade, once again underscoring boundaries. Model 14 studies the post-1988 sample, and the results show that all-classical nonborrowers and all-nouvelle nonborrowers had low likelihoods of upgrades. Thus, nonborrowers suffered in the era of weakening boundaries. All four models show that there were payoffs to categorical purity in an era of segregation before 1988. However, in an era wherein blending pressures dominated, being an all-nouvelle nonborrower protected against a downgrade, but got no upside. By contrast, classical chefs who were purists suffered, as did nouvelle purists in the era of weakening boundaries. Thus, there were rewards for experimentation in an era of weakened boundaries.

These results also fit well with the interview data. Early on, nouvelle cuisine arose as an identity movement in which classical cuisine was treated as the enemy. So until 1988, nouvelle cuisine exponents who did not borrow

from classical cuisine were protected. When the strident opposition softened, as nouvelle cuisine emphasized mixing and combination during the period after 1988, classical cuisine and nouvelle cuisine chefs who did not combine got penalized via low upgrades.

We conducted a number of other robustness tests that we do not report for the sake of brevity. We explored whether restaurants with the “wrong identity” were penalized via omission in the *Guide Michelin*. We examined whether restaurants listed in *Gault-Millau* (the other important guide in France) also were listed in the *Guide Michelin* and vice versa. Because the *Guide Michelin* is more comprehensive, it was not a surprise that virtually all the restaurants featured in *Gault-Millau* were listed also in the *Guide Michelin*. However, we found that several restaurants covered in the *Guide Michelin* were excluded by *Gault-Millau*. We computed a dependent variable called “missing” and set it to 1 when a restaurant was featured in the *Guide Michelin* but excluded from *Gault-Millau*, and 0 when it was featured in both guides. Our results showed that *Gault-Millau* tended to exclude restaurants when they were older, had pure classical menus, and tended to borrow

Table 4. Robustness Tests: Weibull Models of Upgrade and Downgrade

	Model 10 (to 1988)	Model 11 (post 1988)	Model 12 (Interaction)	Model 13 (to 1988)	Model 14 (post 1988)
Dependent Variable	Downgrade	Downgrade	Downgrade	Upgrade	Upgrade
Prior Stars	1.72*** (.15)	2.21*** (.37)	1.73*** (.15)	-2.36*** (.31)	-2.95*** (.55)
Prior Upgrade	-.70* (.27)	-1.66** (.50)	-.75*** (.22)	1.99*** (.17)	2.30*** (.18)
Prior Downgrade	2.52** (.21)	3.65*** (.44)	2.66*** (.20)	.21 (.21)	.006 (.35)
Price/1000	-.02 (.08)	.06** (.02)	.01 (.08)	.04*** (.01)	.07*** (.01)
# of rooms	.11 (.07)	-.01 (.13)	.05 (.07)	.05 (.07)	-.13 (.08)
Location/1000	-.03 (.04)	-.02 (.07)	-.02 (.03)	-.02 (.03)	.01** (.004)
MOF award	-1.30* (.65)	-3.66** (1.28)	-1.68*** (.64)	.35 (.34)	.74* (.40)
Change	.89 (.57)	-.92 (.93)	.63 (.50)	.99* (.44)	1.03 (.95)
Time since last change	-.11 (.14)	.12 (.10)	-.04 (.10)	-.31* (.16)	-.04 (.12)
Change \times Age	-.53** (.26)	.16 (.36)	-.42* (.27)	-.57** (.21)	-.36 (.37)
Cumulative Changes	-.09* (.05)	-.06 (.08)	-.09** (.05)	-.02 (.05)	-.25*** (.07)
All-classical Non-B	.18 (.37)	-.34 (.85)	-.02 (.35)	-.51 (.33)	-1.65* (.72)
All-Nouvelle Non-B	-12.77*** (.30)	-11.56*** (.62)	-12.72*** (.26)	.91* (.41)	-14.25*** (.49)
All-classical Borrower	.05 (.57)	.72 (.64)	.09 (.50)	-.03 (.53)	.84 (.60)
All-Nouvelle Borrower	.05 (.20)	.38 (.78)	.13 (.41)	.78 (.49)	.04 (.49)
Hybrid Borrower	-.06 (.35)	-.18 (.46)	-.07 (.30)	.09 (.37)	.26 (.42)
No. of techniques borrowed	.38* (.20)	-.19 (.32)	-.10 (.25)	-.18 (.24)	-.16 (.26)
1988 Dummy	—	—	.06 (.33)	—	—
1988 Dummy \times Borrowed	—	—	.49* (.25)	—	—
Spells	10942	4747	15689	10942	4747
Age Parameter	1.36*** (.12)	1.36*** (.21)	1.34** (.10)	1.29*** (.09)	1.44*** (.16)
Degrees of Freedom	17	17	19	17	17
Wald χ^2	5027.89***	931.17***	6256.10***	512.62***	1590.73***

Note: Data in parentheses are robust standard errors of estimates. Constant has been omitted. All χ^2 tests are based on a baseline model with no covariates. MOF award = *un des Meilleurs Ouvriers de France* award (One of the Best Craftsmen of France); Non-B = non-borrower.

^a 1988 Dummy multiplied by number of techniques borrowed.

* $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

from a rival cuisine. It included restaurants that were higher priced and tended to change often. These results provide striking evidence that restaurants with the “wrong identity” were excluded from *Gault–Millau* rather than the *Guide Michelin*.

We used zero-inflated negative binomial models to discern whether the effects of high-status borrowers were different between those with zero counts and those with a nonzero count of techniques borrowed. We found that high-status borrowers reduced the probability of having a zero count and increased the count of techniques borrowed. Moreover, because our counts of borrowing were censored at the top end, we reran Table 4 with censored regression or tobit models and obtained comparable results. We also included a lagged dependent variable (number of techniques borrowed by the chef in the prior year) and reran Model 2. We found that the effect of geographically proximate high-status borrowers on the mean number of techniques borrowed became insignificant. However, it continued to decrease variance significantly. The implication is that borrowing by high-status actors jump-started initial adoption by the focal actor, but once the focal chef–restaurant dyad had borrowed, the chef’s past actions created momentum for further borrowing. Globally, however, borrowing by high-status actors reduced variance in the system, so chefs converged on a new standard of borrowing.

Other unreported findings concern our analyses of the effects of borrowing. We checked whether our results held if we included in our analysis the proportion of blending rather than the total amount of borrowing. We therefore used a Herfindahl index, which measured concentration of techniques in a cuisine for each chef–restaurant dyad. In our context, each chef–restaurant dyad could be treated as a “market,” and classical and nouvelle cuisine could have “shares.” We found that those whose techniques were concentrated in one cuisine were more likely to have positive ratings. We ascertained whether our results held if we added the blending of ingredients to the blending of techniques, and obtained results similar to those reported in Tables 4 and 5. We also checked whether our results held if we clustered our observations by chefs rather than by chef–restaurant dyads, or for that matter, by

restaurants. Clustering by chefs or by restaurants produced results comparable with those reported in Tables 3 and 4.

DISCUSSION

Although sociological analyses of markets have emphasized the effects of strong categorical boundaries, they have devoted little attention to the causes and consequences of boundary erosion. Our findings speak to the call for more research on the “the conditions under which boundaries generate differentiation or dissolve to produce hybridity” (Lamont and Molnar, 2002:189). Our findings on the causes of boundary erosion enlarge the reach of neo-institutional theory, and our results on the effects of boundary erosion inform sociological analyses of markets. Both sets of findings are relevant to cultural sociologists. We elaborate them in the following discussion.

CONTRIBUTIONS TO NEO-INSTITUTIONAL THEORY

A central problem in neo-institutional theory is that the durability of the strength of institutions poses a challenge for understanding institutional change: if institutions constrain, how is change possible? (Clemens and Cook 1999). Much of the literature has emphasized exogenous shocks as the triggers of change, but has given short shrift to the endogenous sources of change, especially, deinstitutionalization (DiMaggio 1991; Scott 2001). Moreover, although neo-institutionalists agree that culture is a tool kit (Swidler 1986), and that actors engage in bricolage (Douglas 1986), there is little research on how actors creatively tinker with techniques from rival categories infused with competing logics (Campbell 2003).

Our study enlarges the reach of neo-institutional theory by developing an endogenous account of the deinstitutionalization of categorical boundaries in the case of an opposing category pair. We have suggested that the key to boundary erosion was the borrowing of techniques from a rival category, which led to the crossover of cultural materials. When boundaries are strong because of external sanctions, most actors do not borrow, and the small number that do borrow, do so most of the time. As a result, the mean number of elements (μ) bor-

rowed from the rival category for each actor is likely to be low, but the variance (σ^2) in the number of elements borrowed is high. Conversely, when boundaries are eroding, the mean number of elements (μ) borrowed by an actor from the rival category increases, but the variance (σ^2) in the number of elements borrowed declines.

In the current study, geographically proximate high-status actors had more latitude to be original, could borrow techniques from a rival category, and served as influential role models for other chefs. Thus, boundaries between categories weakened when members of a category borrowed from the rival category and the sources of erosion were endogenous.

The mean variance framework for looking at borrowing focused on techniques, but one can easily generalize it to other contexts such as the borrowing of cultural carriers: for example, personnel, artifacts, and symbols between rival categories or systems. Our study looked at boundary erosion, but one can also conceive of boundary institutionalization as a process in which the mean number of elements borrowed declines and variance increases. We think that focusing on mean elements imported and variance in these elements is a useful step in understanding cultural diversity in organizational life.

CONTRIBUTIONS TO SOCIOLOGY OF MARKETS

The categories that define a form or a genre imply not only penalties, but also a blueprint (Carroll and Hannan 2000:67). To date, sociological analyses of markets have analyzed penalties by showing that sanctions are levied on those who cross categories because critics and consumers are specialized by category (Carroll and Swaminathan 2000; Zuckerman and Kim 2000). By doing so, these studies imply that the penalties preserve the blueprint underlying a category. However, there has been little direct investigation of blueprints and how alterations in the blueprint can lead to changes in the penalties. The borrowing of techniques from a rival category fuels recombination and impairs the blueprint, thereby providing an opportunity to understand how weakened blueprints alter social sanctions.

Our study responds to this gap in the literature. As described in the preceding section, we show that boundary weakening occurs when borrowing from a rival category leads to the

weakening of blueprints, and specify how it occurs through an endogenous process kick-started by high-status actors.

Our results also show that the oppositional category pairs have a hierarchical structure. The results of our hazard rate analyses show that nouvelle nonborrowers were least likely to receive a downgrade. Further analyses demonstrated that they were likely to benefit in an era of strong boundaries when authenticity mattered because nouvelle cuisine was in strident opposition to classical cuisine. Thus, claims to categorical purity imply risks of contamination and concomitant sanctions. These risks decline when boundaries are weakening and mixing is welcomed. As a result, classical borrowers benefited during the era of weakened boundaries, and classical nonborrowers suffered. These results suggest that the risks of contamination for purists depend on the strength of blending processes.

Our analyses of French haute cuisine show that those who borrowed techniques received penalties in the form of a downgrade by external evaluators. We show that the penalties diminished as the fraction of chefs who borrowed increased and borrowing became prevalent in the social system. Thus, changes in the blueprint diminish the symbolic potency of boundaries and deactivate penalties for boundary crossing. One reason is that widespread borrowing is tantamount to repeated code violations, and repeated code violations in turn impair the potency of social sanctions. A second reason is that pervasive borrowing increases the costs for critics—of discerning violations and justifying penalties. Indeed, our interviews with critics suggested that their evaluation task became more complex and uncertain due to the mixing of genres. Our finding is similar to Rosenfeld and Kim's (2005) discovery that the cost of nontraditional marriages and gay unions declines as they become more common, and underscores a general process whereby the ubiquity of violations impairs penalties.

In contrast to prior research, which has studied contexts in which critics specialize by category and cannot understand firms that cross boundaries (Zuckerman 1999; Zuckerman and Kim 2003), we studied the relationship between chefs and a single yet powerful critic, the *Guide Michelin*, an organization with trained staff, whose ratings spell stardom or loss for chefs.

The relationship between chefs and a predominantly influential critic is far from idiosyncratic. Firms are monitored by a single regulator in many industries. For example, law schools and medical schools have influential critics who rate them, and Robert Parker's *Wine Advocate* is far more consequential than many other wine ratings. Our study shows that despite the unequal relationship between chefs and the *Guide Michelin* situation, the critic was less an enforcer of ex-ante boundaries than an ex-post teller of tales. Actors redrew categorical boundaries through borrowing, and critics in turn recognized these new boundaries.

CONTRIBUTIONS TO CULTURAL SOCIOLOGY

Finally, our findings also inform a debate among cultural sociologists as to when actors are univores focusing on one genre or omnivores gobbling up genres. Sociological analyses of consumption have shown that high-status actors (defined as those with higher education and income) consume many artistic genres, and thereby blur boundaries. Peterson and Kern (1996) found that high-brow individuals liked low-brow and middle-brow musical genres and suggested that elites were omnivores rather than snobs. Bryson (1996) reported that educated respondents who liked multiple genres of music also rejected genres such as rap, heavy metal, and country that were associated with the least educated.

In contrast to these studies, our own study analyzed the behavior of producers. The results show that producers who experienced an upgrade in their status were more likely to borrow techniques from a rival category, whereas those afflicted by a downgrade in their status did not cross genres. Interestingly, neither skill nor tenure affected the tendency to cross genres. These results partly complement sociological studies of consumption showing that high-status actors are more likely to devour genres.

Nevertheless, there are two important differences between the consumption of cultural genres and cultural production of those genres. One difference pertains to the salience of authenticity. Producers face a tension. They have to be original while also conforming to the conventions of a genre. High-status actors have more latitude with being original. They can borrow

from another genre and spark a process of imitation by their peers.

A second difference is that producers have to contend with critics who serve as the eyes and ears of consumers. Critics tend the border and are concerned with authenticity, so borrowing invites penalties from critics. However, when high-status actors jump-start an imitative process, and borrowing of techniques from another genre becomes rampant, the penalties diminish. Thus, producers are not subservient to critics, but instead, redefine boundaries for the critics to recognize. So critics are midwives of boundary change rather than zealous guardians of genres.

By studying the social determinants of categorical boundaries, our article brings into focus the cultural scope of firms—the appropriateness of their domain of activity. Although a large literature on the economics of scope focuses on how internal coordination costs determine the efficient boundaries of organizations (Williamson 1985), much less attention has been devoted to the external determinants of the cultural scope of actors in markets. A number of questions deserve attention. How does the entry of new critics reshape understandings about categorical boundaries and the cultural scope of firms? What is the division of labor between internal audiences (members of a profession or an industry) and external audiences (critics)? How do social movements prompt change in the division of labor? Research into these and related questions is essential if we are to build a theory of cultural scope to complement the theory of economic scope and show how external processes rather than internal coordination costs influence the boundaries of organizations.

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