CODE AND CONDUCT IN FRENCH CUISINE: IMPACT OF CODE CHANGES ON EXTERNAL EVALUATIONS

RODOLPHE DURAND,[1]* HAYAGREEVA RAO[2] and PHILIPPE MONIN[3]
[1] *HEC School of Management, Paris, Jouy en Josas, France*
[2] *Graduate School of Business, Stanford University, Stanford, California, U.S.A.*
[3] *E. M. Lyon, Ecully, France*

We study the effects of organizational code-preserving and code-violating changes on external evaluations by third parties—an essential but under-studied strategic outcome. We define code-preserving changes as a variation in the firm's product range that preserves the social code within which the firm positions its offering. By contrast, a code-violating change corresponds to a variation in the product range that breaks with past codes and embraces another social code. Our analyses of French haute cuisine restaurants show that code-preserving changes and code-violating changes have positive effects on external evaluations. Both effects decline with prior evaluations received by the organization, but only the effect of code-violating changes is reduced with age. Moreover, external evaluations improve when restaurants undertake more code-preserving changes than their direct competitors but decline when they make more code-violating changes than competitors. These results enable us to derive implications for research on strategic change, strategic groups, and strategic social positioning. Copyright © 2007 John Wiley & Sons, Ltd.

INTRODUCTION

Since the seminal work of Thompson (1967), a core premise of the strategic management literature is that domain consensus is essential for organizations to survive and thrive. Thompson (1967: 29) argued that domain consensus 'defines a set of expectations both for members of an organization and with whom they interact, about what the organization will and will not do.' However, there has been disagreement about the extent to which domain consensus acts as a constraint on what kinds of organizational change are possible (Fox-Wolfgramm, Boal, and Hunt, 1998; Van de Ven and Poole, 2001), especially, the extent to which conformity or deviance is beneficial to organizations (Zajac and Kraatz, 1993; Deephouse, 1999). In particular, early ecological and neo-institutionalist arguments suggested that changes that entailed a departure from norms triggered sanctions by the environment (Hannan and Freeman, 1989; DiMaggio and Powell, 1983). By contrast, other studies have shown that illegitimate organizational changes need not lead to negative outcomes for organizations (Kraatz and Zajac, 1996; D'Aunno, Succi, and Alexander, 2000).

To date, this conflicting picture of the effect of deviant changes has hinged on three assumptions. First, researchers have assumed that an organization conducts one type of change—be it radical or incremental, core or peripheral (e.g., Singh, Tucker, and House, 1986; Fox-Wolfgramm *et al.*, 1998; Greve, 1999). Second, the identities of organizations are established in stable and essentialist

terms—so some writers depict organizations as intrinsically flexible and adaptive and others as intrinsically inert and rigid. Third, the outcomes studied typically concern performance and survival (Amburgey, Kelly, and Barnett, 1993; Child, 1997; Zajac and Kraatz, 1993).

This paper makes three contributions. First, we consider how organizations can undertake changes of a diverse nature concurrently. Second, we do not ascribe essentialist qualities to an organization (inert or flexible) per se but, instead, explore whether an organization change preserves or violates domain consensus. Third, we focus on intermediary outcomes of strategic value—external evaluations–as a key mediator to performance and survival.

More specifically, we draw on recent work by Polos, Hannan, and Carroll (2002), who relate socially coded identities to the notion of a domain consensus (see also Hannan, Polos, and Carroll, 2004). A code consists of properties that an organization should legitimately possess, and violations of the code lead to downward valuations of the organization by observers. We extend this line of argument by specifically distinguishing between the code-preserving changes and code-violating changes undertaken by an organization and analyze their effects on external evaluations. We look at whether the code-conforming and code-violating changes made by an organization exceed or lag behind changes undertaken by peers to discern the pay-offs to deviance. Finally, we test whether the effects of code-preserving or code-violating on external evaluations decline with age and prior evaluations.

Our empirical setting is haute cuisine French restaurants during the period 1968 until 1997. We focus on this industry because it is an 'extreme case' (Eisenhardt, 1989) to understand the role of codes and organizational changes. More specifically, haute cuisine in France is interesting because this industry is rooted on intellectual discourses linked to the primary acts of production and consumption (Ferguson, 2004). As a result, French cuisine consists of easily identifiable codes, namely classical and nouvelle cuisine. Each cuisine means the use of different ingredients, culinary techniques, dish presentation, kitchen organization, and service to the table. Moreover, there is a decisive external evaluator—the *Guide Michelin* which awards anywhere from zero to three stars to chef–restaurant dyads. We define code-preserving changes as a variation in a firm's product range that preserves the social code within which the firm positions its offering. By contrast, a code-violating change corresponds to a variation in the product range that breaks with past signals and embraces a rival social code. Hence, code-preserving changes in 'signature dishes' maintain the cuisine (be it classical or nouvelle) while code-violating changes imply a shift from one cuisine to another. We explore the effects of both types of changes on the number of stars awarded by *Guide Michelin* to the chef–restaurant dyad.

Our study has implications for three areas: strategic change, strategic group, and strategic social positioning. First, this paper provides a theory of the relationships between types of organizational change and external evaluations that eschews the pitfalls of an entrenched debate between isomorphism and adaptation (Deephouse, 1996; Dacin, 1997; Kraatz and Zajac, 1996; Durand, 2006). In particular, we assess how firms that simultaneously seek to submit to oppositional codes fare in terms of external evaluations. Second, based on cognitive and social categorization processes, the strategic group literature has considered recently that strategic groups have socially defined identities (Peteraf and Shanley, 1997; McNamara, Deephouse, and Luce, 2003). Hence, all organizations belonging to a group have to conform to a code enforced by insiders and outsiders, and strategic groups differ in performance and reputation (Ketchen *et al.*, 1997; Ferguson, Deephouse, and Ferguson, 2000). Peteraf and Shanley (1997) assumed that a strong group identity increases a group's positive reputation, but left unanswered both the questions of how organizational changes affect the external evaluation and how group identification culminates in improved public standing for a given organization (McNamara *et al.*, 2003). In this paper, the construct of a code provides a mechanism to understand why and how both strategic changes and identification with the strategic group's recipe translate or not into an organization's favorable external evaluations.

Finally, although strategic management researchers are attuned to the cultural forces that produce organizational change (DiMaggio and Powell, 1983; Zajac and Kraatz, 1993), the consequences of adopting a strategic social positioning *vis-à-vis* a critical audience have been largely ignored, except in a few studies (Rao, 1998; Zuckerman, 1999; Phillips and Zuckerman, 2001). However,

a consideration of the role of critics, raters, and intermediaries is necessary if we are to appreciate the socio-cultural constraints on organizational change (Podolny, 1993; Zuckerman, 1999; Washington and Zajac, 2005).

THEORY: CODES, CHANGES, AND EXTERNAL EVALUATIONS

Polos *et al*. (2002) and Hannan *et al*. (2004) suggest that social forms are categories which impose constraints on members. Each social form, therefore, embodies a socially coded identity that defines legitimate attributes and actions possible for a member of the form. A social code is both a set of signals (as in the genetic code) and a set of rules of conduct (as in the penal code; Polos *et al*., 2002). Codes represent default assumptions about behavior, and define the domain consensus of an organization. They delineate the limits within which changes can take place freely—freely means both deliberately and without social cost (but changes might be economically costly). For these authors, violation of codes leads to a drop in valuation, by the social form's insiders and also by outsiders such as external critics, third parties, and the like.

Since organizations belong to a social form, they can undertake code-preserving or code-violating changes. A code-preserving change is any variation that conforms to the rules of conduct representative of the social form within which the organization is nested. By contrast, a code-violating change is any variation that violates the rules of conduct representative of the social form. Code-preserving changes maintain an organization's membership in the social form or category, protect its legitimacy, enable an organization to draw on existing competencies, and, therefore, are likely to be rewarded by critics seeking to enforce social codes. By contrast, code-violating changes dismantle membership in the existing social form, impair the legitimacy of the organization, impose coordination costs and are likely to be met with disfavor by external evaluators. Therefore:

Hypothesis 1: Code-preserving changes will lead to positive external evaluations.

Hypothesis 2: Code-violating changes will reduce positive external evaluations.

Whether one changes more or less than a competitor is as consequential as how much one changes in absolute value (Barnett and Hansen, 1996: 142). What matters is not only the absolute number of code-preserving and code-violating changes undertaken by a focal organization, but also whether they exceed the average number of such changes initiated by competitors (Dranove, Peteraf, and Shanley, 1998). Some writers have suggested that firms that balance similarity and distinctiveness outperform others who choose to be similar (Deephouse, 1999; McNamara *et al*., 2003). If the focal organization exceeds the average number of code-preserving changes initiated by competitors, then it is likely to be distinctive and innovative, and be rewarded with increased external evaluations by critics. By contrast, if the focal organization surpasses the average number of code-violating changes initiated by competitors, it is perceived to be deviant by critics, and penalized through lower evaluations (Polos *et al*., 2002). Indeed, a higher amount of code-violating changes than peers can lead to potential confusion among external evaluators and customers about the firm's identity, and they may be unable to categorize it. Internally, such code-violating changes may require unlearning, destroy old competencies, and divert organizational attention and thereby, jeopardize the external standing of the firm (Hannan *et al*., 2004). Therefore:

Hypothesis 3: The more code-preserving changes undertaken by an organization relative to its peers, the more likely is it to receive positive external evaluations.

Hypothesis 4: The more code-violating changes undertaken by an organization relative to its peers, the less likely is it to receive positive external evaluations.

Organizational age is likely to moderate the effect of code-preserving and code-violating changes on external evaluations. The older an organization, the greater is its reliability; and the more code-preserving changes it undertakes by itself, or in comparison to peers, the greater is its ability to implement them, and the more likely are critics to reward it with favorable evaluations (Singh *et al*., 1986; Hannan, 1997; Polos *et al*., 2002). By contrast, the older an organization and the more code-violating changes it pursues by itself, or *vis-à-vis*

peers, the harder it is for it to be effective, and the more likely are critics to penalize it (Oliver, 1991; Kondra and Hinings, 1998; Hannan *et al.*, 2004). Put another way, the younger an organization, the less defined are the expectations of external observers, and the more latitude there is for younger organizations to undertake code-violating changes (Phillips and Zuckerman, 2001). Moreover, younger organizations are less routinized than older organizations, and their relative plasticity enables them to successfully undertake code-violating change (Zajac and Kraatz, 1993). Finally, younger organizations may also benefit from low expectations, so that when they undertake code-violating changes they can gain greater increases in external evaluations (Greve and Taylor, 2000). Therefore:

> *Hypothesis 5: Older organizations that pursue code-preserving changes will be more likely to receive positive external evaluations.*

> *Hypothesis 6: Older organizations that pursue code-violating changes will be less likely to receive positive external evaluations.*

The Matthew effect suggests that higher-status organizations are likely to receive more benefits for undertaking the same improvements as lower-status actors (Washington and Zajac, 2005). Thus, the more favorable the evaluation from critics received in the past, the higher is the organization's status, and the more likely is the organization to receive favorable evaluations for undertaking code-preserving changes. The Matthew effect also implies that higher-status organizations are likely to be more protected for infringing norms than lower-status actors (Podolny, 1993; Rao, 1994). Phillips and Zuckerman (2001) show that high-status players are tempted to defy the codes and differentiate from the middle-status players who are enticed to conform more strictly to expectations. So the more favorable the external evaluations, the more immune is the organization for pursuing code-violating changes, and the less likely is it to face a downgrade in evaluations. Therefore:

> *Hypothesis 7: Better evaluated organizations that pursue code-preserving changes will be more likely to receive positive external evaluations.*

> *Hypothesis 8: Better evaluated organizations that pursue code-violating changes will be more likely to receive positive external evaluations.*

However, an alternative view is that status may generate higher expectations from critics and external observers and be a liability for firms contemplating code-preserving and code-violating changes (Washington and Zajac, 2005). In particular, Phillips and Zuckerman (2001) stress that for code-violating changes to be manifested the status structure must confer security to the top-ranked actors, give some prospect of mobility to the middle-ranked actors, and render the lowest-ranked actors observable to outsiders. Therefore, there exist cases where the better evaluated an organization, the more defined are expectations about reliability, and the more concrete are its obligations (Polos *et al.*, 2002). In such cases, code-preserving and code-violating changes may disrupt these expectations and lead to lowered evaluations. Therefore:

> *Hypothesis 7 alt: Better evaluated organizations that pursue code-preserving changes will be less likely to receive positive external evaluations.*

> *Hypothesis 8 alt: Better evaluated organizations that pursue code-violating changes will be less likely to receive positive external evaluations.*

DATA AND METHODS

We tested these hypotheses by analyzing the effect of cuisine changes on external evaluations of haute cuisine French restaurants during the period 1968 until 1997. We chose the gastronomic field in France as our setting for three reasons. First, the gastronomic field in France, as Ferguson (1998: 637) observed, is simultaneously the site of convention and invention, and of identity struggles. We can therefore observe over time the effects of changes on critics' evaluations. Second, classical cuisine and nouvelle cuisine embody two alternative forms of cooking. Each type follows strict precepts and rules and a crossover from one cuisine to another entails a code violation as it means the use of different ingredients and different cooking techniques. Third, nouvelle cuisine, like other movements in professions and occupations, came from the center rather than the periphery and was led

by influential insiders (Bocuse, Troisgros brothers, and Chapel) rather than by low-status outsiders. So it enjoyed legitimacy as a social code from its origin.

Background

Classical cuisine had 'high culture' origins in the post-revolutionary France of 1789. Classical cuisine was initially developed by chefs who were ex-employees of the aristocracy that was displaced by the French Revolution. These chefs established restaurants that were viewed as 'temples of gastronomy' and were patronized by a gastronomic elite that could acquire status by eating at fine restaurants (Ferguson, 1998: 605–607). Until the 1970s, the elite cuisine of France was a structured and organized system of gastronomy. Many dishes were interrelated, and their names contained clues as to their ingredients. For example, soups were broken down into consommés (clear soups), potages (thick soups), crèmes (cream soups), and veloutés (made with a white sauce). Within each of these categories there were subcategories, depending upon the base used, the thickening agent, the garniture, the flavoring spice, herb, or alcohol, and other considerations. This structured classical cuisine was codified in Escoffier's cookbooks—notably *Le Guide Culinaire* (1903), in which he formalized classical French cuisine in its modern form, setting down thousands of menus and clarifying the principles of French gastronomy (Escoffier, 1903/1993).

In the late 1960s a group of young French chefs led by Paul Bocuse, Michel Guérard, the Troisgros brothers Jean and Pierre, and Alain Chapel invented a free-form style of cooking soon to be named nouvelle cuisine. Their style disregarded the codification of Escoffier and replaced it with a philosophy rather than a structured system of rules, creating not a school but an anti-school, in reaction to the French grande cuisine. The basic characteristics of nouvelle cuisine included the replacement of the thickening of sauces with reductions of stocks and cooking liquids; the serving of novel combinations in very small quantities artistically arranged on large plates; a return to the importance of the purchasing of food; and infinite attention to texture and detail. At its best, nouvelle cuisine produced dishes that avoided rich sauces and lengthy cooking times, and its creative and inventive practitioners aroused interest and excitement

in gastronomy generally and in restaurants specifically.

Data

We started our window of observation in 1968 when the nouvelle cuisine appeared on the culinary landscape and ended our window of observation in 1997. The two codes have been coexisting for the entire period of study (Figure 1). After 1997, the gastronomy field underwent the pressure of new forces, less connected with food philosophy and cuisine ethics but more with economic considerations. New forms of building and exploiting reputation developed, such as contracts with food industry companies so as to use the chef's reputation for promoting preprepared meals, or initial public offerings (IPOs) of restaurants like Ducasse's, and the creation of subsegments in the haute cuisine industry like the 'bistro' trend.

We interviewed a panel of French chefs with varying levels of Michelin stars, culinary journalists, and professors in culinary academies to gain a contextual understanding of haute cuisine. Our respondents indicated that divergent routines from each code led to opposing conceptions of a chef's role. Chefs referred to classical cuisine as embodying a 'traditional' identity emphasizing hierarchy and structure, and nouvelle cuisine as representing a rival identity extolling autonomy and improvisation. Our panel of chefs indicated that the principles of organization, coordination, and techniques required for one type of cuisine dramatically differ from the other. So shifting abruptly from one type of cuisine to the other entails severe consequences in terms of identity of the chef and cooks, mobilized knowledge, image, and identity of the restaurant. They also suggested that haute cuisine French restaurants were those whose chefs had received a one-star rating or more by the *Guide Michelin*.

We obtained a listing of elite French chefs from the *Guide Michelin* since it is an authoritative and widely disseminated guide in which experts rank chefs (Ferguson, 1998; Karpik, 2000) and is neutral *vis-à-vis* classical and nouvelle cuisine. By contrast, the Gault Millau guide favors nouvelle cuisine, as the two founders of the guide were the ones who codified the principles of nouvelle cuisine into the 'Ten Commandments' of nouvelle cuisine. An haute cuisine chef was defined as an individual who had received a minimum of one
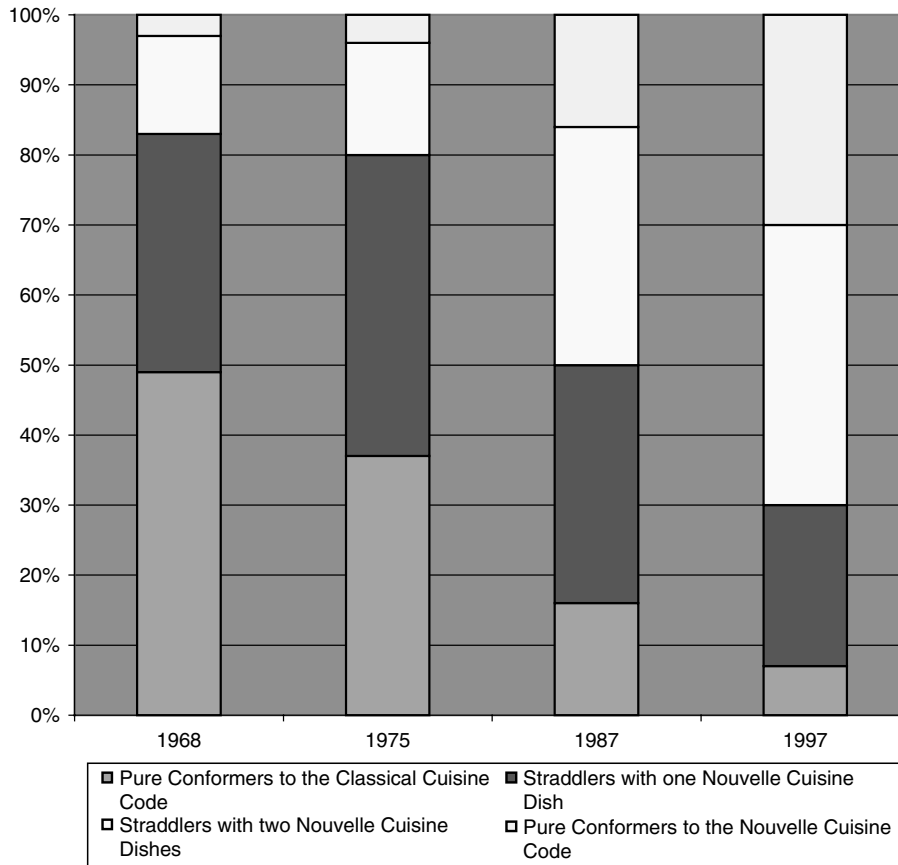
Figure 1.   Distribution of chef–restaurant dyads by cuisine types (dish level, 1968–97)

star in the Michelin guide during our window of observation. For each year, we collected information on all chefs who had received one star or more during the period 1968 until 1997, and chefs who had lost their only star in a given year were also followed throughout the window of observation.

Our interviews with the panel of chefs and industry experts suggested that the appropriate unit of analysis was the chef-restaurant dyad because elite chefs decided on the choice of cuisine, and could have moved from one restaurant to another. Accordingly, our dataset consisted of chef–restaurant 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.

Evaluation and dependent variable

Our dependent variable, external evaluation, was defined as the number of stars received by a chef in the *Guide Michelin* each year. External evaluation can have three values: 1, 2, or 3. When awarding stars, unlike other guides, Michelin inspectors do not take into account a restaurant's ambiance and surroundings, or other elements that could compensate for the dish quality. A Michelin evaluator insisted: 'Only the quality of the dish counts.' Michelin evaluators reserve a table in advance, choose their menu from a set of specialties, consume, and pay. Every few years, if not months, inspectors change from one region to another. Consequently, inspectors rate the restaurants based on the quality of the dishes they decide to order, and this choice is independent from the trio of specialties that the *Guide Michelin* lists for all starred

chef–restaurant dyads. Indeed, chefs list the dishes that embody their personality in a process (questionnaire) independent from anonymous visits.

Independent variables

We studied code-preserving and code-violating changes at the most fine-grained level of analysis that was available—signature dishes. Each year, the *Guide Michelin* lists three 'signature' dishes of any chef in a given restaurant who received a star. When answering a questionnaire sent by the *Guide Michelin*, each chef selects the signature dishes to appear in the guide. Chefs must mention three specialties that are served on a regular basis, to avoid dishes chosen by chefs to please Michelin inspectors and show their technical mastery. *Guide Michelin*'s chief redactor said, 'Our discourse is: tell us what is the most representative of your style. The specialty must guide, be an indicator of the type of cuisine. It is an important base of selection for readers.' Hence, these dishes communicate the distinctive skills of the restaurant and define its identity for employees and image for customers, and positioning relative to available codes of cooking. We collected information on the signature dishes nominated by all the chefs in our database, and designed a computer program to code the dishes into classical and nouvelle cuisine based on the rules of both cuisines as stated in Fischler (1993) and Neirinck and Poulain (1988).[1] We then extracted a random sample of 400 dishes, and asked two raters to code these signature dishes into the classical and nouvelle cuisine categories. One rater was a consultant to the Chambre Syndicale de la Haute Cuisine Française (an elite group of two- and three-star chefs) and a former chef himself, and the other was a retired chef with Michelin stars to his credit. The raters did not know each other. The inter-rater 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.

A code-preserving change was defined as a dish change of the same nature, i.e., either a replacement of a dish from classical cuisine by another classical cuisine dish or a replacement of a nouvelle cuisine dish by another nouvelle cuisine dish. By contrast, a code-violating change was a replacement of a classical cuisine dish by a nouvelle cuisine dish or vice versa. Since chefs nominate three signature dishes, the maximum of preserving and transforming changes per year (relative to prior year) is three and the minimum is zero. To test Hypotheses 1 and 2, we separately measured the number of code-preserving and code-violating changes at $t-1$. For instance, at $t-1$, a restaurant having two classical cuisine dishes A and B and one nouvelle cuisine dish C presents at t two new classical cuisine dishes D and E and one new nouvelle cuisine dish F. The coding of the code changes in that case indicates three code-preserving changes. If the same restaurant presented at t one new classical cuisine dish G, and two nouvelle cuisine dishes (C and one new H), we would have had: one code-preserving change (A to G) and one code-violating change (B to H). These variables (*code-preserving changes at $t-1$*, *code-violating changes at $t-1$*) indicate the content of change every year and over time.[2]

For relative changes *vis-à-vis* peers, every year we calculated the difference between a chef's number of changes and the average of competitors' changes. We defined competitors as the chefs belonging to the same region with the same evaluations (same number of stars). Cuisine is a regional phenomenon for at least three reasons. First, there is a significant connection between cuisine and geography. The ingredients available differ from Alsace to Burgundy, for instance. Second, the dispersion of starred chefs is not even across the country. Paris concentrates many starred chefs, while in the western part of the country fewer starred chefs are present. Third, space limits competition: a client in Toulouse does not compare all French restaurants to make a choice, but only the restaurants located (say) in a one-hour drive radius. We called these variables '*Code-preserving changes relative to peers*' and '*Code-violating changes*

---

[1] As there are roughly 600 starred chefs a year who mention three dishes each over a 30-year period, we had to devise a computer program to help us code the 54,000 dishes ($600 \times 3 \times 30$). The computer program is based on the nature of the ingredient used (classical cuisine ingredients such as lobster, haze, or frog; nouvelle cuisine ingredients include celery or young rabbit), the type of transformation used (e.g., roasted, poached, fried, baked, sauté), and the combination of ingredients and transformations (for instance, applying a traditional meat transformation to fish is a nouvelle cuisine trait).

[2] We checked whether code-preserving changes outnumber code-violating changes over the years. If not, code-violating changes could be considered the norm, implying unstable and imprecise codes. For one code-preserving change, we observed 0.7 code-violating change on average over the period.

relative to peers', and used them to test Hypotheses 3 and 4.

To test Hypotheses 5 through 8, we used interactions between the numbers of code changes and *Restaurant age* and *Lagged evaluation. Restaurant age* is the logged number of years the organization was in existence after being given a star. *Lagged evaluation* is the number of stars obtained by the restaurant at $t - 1$.

Control variables

To control for economic performance, and the relationship between high price and higher evaluations, we included in the models the average price ('*Price*') of the meals that we logged in French francs. Since a restaurant has only a fixed capacity, and its number of seats cannot be increased, and since there is only one service for lunch and one for dinner, the best way for restaurants to capitalize on status is through increased price. It is usually estimated that the price for a 'menu' increases by 20 to 40 percent with one more star.

Some chefs received highly praised awards, like 'Un des Meilleurs Ouvriers de France' (One of the Best French Craftsmen) in cooking and/or pastry, in a national contest run every three years, or the annual Prosper Montagné and Taittinger prizes for best young and promising chefs. These awards are the first steps for chefs toward building legitimacy and image that can positively impact external evaluations. We controlled for such awards ('*Award*') through a dummy variable.

Since external evaluations can be affected by the chef's human capital, we accounted for two dimensions of human capital. First, we included a chef's age ('*Chef age*') as a measure of an individual's propensity to change. *Chef age* is a trichotomous variable, with 1 for chefs born after 1960 (who could have been trained for nouvelle cuisine), 2 for chefs born between 1930 and 1960 (who were trained for classical cuisine but were young enough to adopt nouvelle cuisine), and 3 for chefs born before 1930 (who were at the end of their professional career when nouvelle cuisine appeared). Second, we used a chef's level of education ('*Education level*') as a proxy for the individual's potential to conceive and implement changes adequately. Education consists of four levels: 'no degree,' 'first-level degree' (CAP or BEP), 'baccalaureat,' and 'post-baccalaureat education' (equivalent at least to bachelor's degree).

Since cultural industries may be affected by a number of unobserved culinary trends, we controlled for period effects. We created a dummy variable for the '*Early period*' of study—1968 until 1975—when nouvelle cuisine was codified and theorized by chefs, specialists, and journalists (Fischler, 1993). We defined the period from 1976 to 1987 as the '*Middle period*' of study, during which chefs had to select from the two widely diffused codes. We treated the late period beginning from 1988 until 1997 as the reference category. This period witnessed other evolutions such as the internationalization of chefs' education and a greater focus on chefs as artists.

Finally, we included two control variables for the form of cuisine the chef offered in the focal restaurant. We counted the number of classical and nouvelle cuisine dishes for each restaurant–chef year. When the number of classical cuisine dishes is three, '*Conformer to classical cuisine*' variable is 1 (0 otherwise). By contrast, if the three dishes are nouvelle cuisine, '*Conformer to nouvelle cuisine*' is 1 (and 0 otherwise).

All of these variables were lagged and a chef–restaurant dyad years dataset was compiled. Table 1 displays the correlations among the variables used to test the hypotheses. Six correlation coefficients are high by construction (between lagged and current evaluation, restaurant age and early period, price and chef age, between both periods, and between absolute and relative code changes). To assess the risk of multicollinearity problems, we computed variance inflation factors (VIFs) for the equation and for each variable. In conformity with accepted thresholds, none of the combinations of variables introduced in our models presents a VIF greater than 3, and no one individual variable presents a VIF greater than 10.

Methods

Several models were available to test our hypotheses. As our dependent variable is ordinal in nature, ordered logit model is a first possibility since higher values on the dependent variable imply 'higher' outcomes. The ordered logit models presume that odds in k categories have the same ratio for all independent variable combinations. Another possibility, the ordered probit model (McKelvey and Zavoina, 1975), results from modeling the *probit* of the cumulative probabilities as a linear

Table 1. Descriptive statistics and correlation matrix

		Means	S.D.	External evaluation	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Lagged evaluation	1.19	0.46	0.94													
2	Restaurant age	1.89	0.69	0.20	0.22												
3	Price	4.72	0.90	0.21	0.22	0.25											
4	Award	0.25	0.46	0.23	0.23	0.23	0.14										
5	Chef age	1.42	0.53	0.12	0.11	0.08	0.45	0.13									
6	Education level	1.22	0.65	0.12	0.12	0.08	0.15	−0.00	0.30								
7	Early period	0.25	0.43	−0.05	−0.05	−0.40	−0.15	−0.08	−0.33	−0.10							
8	Middle period	0.42	0.49	0.01	−0.00	0.09	−0.02	0.02	−0.07	−0.00	−0.48						
9	Conformer to classical cuisine	0.24	0.43	−0.08	−0.08	−0.08	−0.34	−0.05	−0.20	−0.06	0.28	−0.02					
10	Conformer to nouvelle cuisine	0.11	0.32	0.02	0.02	0.04	0.23	0.00	0.12	0.01	−0.16	−0.05	−0.20				
11	Code-preserving changes at $t-1$	0.80	0.90	0.09	0.08	0.22	0.31	0.07	0.19	0.06	−0.25	−0.02	−0.14	0.17			
12	Code-diluting changes at $t-1$	0.54	0.75	0.07	0.06	−0.29	−0.01	−0.04	0.03	0.03	0.03	−0.04	−0.01	0.02	0.16		
13	Code-preserving changes relative to peers	0.00	0.89	0.06	0.06	0.03	0.25	0.04	0.18	0.07	−0.18	−0.03	−0.11	0.15	0.68	−0.09	
14	Code-diluting changes relative to peers	0.01	0.72	0.01	0.01	0.02	0.26	0.01	0.17	0.07	−0.22	0.00	−0.21	0.06	−0.09	0.66	−0.09

function of the covariates, so that

$$\Phi^{-1}(\gamma_{ij}) = \theta_j + \mathbf{x}_i'\,\beta$$

where $\Phi()F$ is the standard normal cumulative density function. The model can also be obtained from the latent-variable formulation assuming that the error term has a standard normal distribution, and this is usually the way one would interpret the parameters. Estimates from the ordered probit model are usually very similar to estimates from the ordered logit model—as one would expect from the similarity of the normal and the logistic distributions—provided one remembers to standardize the coefficients to correct for the fact that the standard normal distribution has variance 1, whereas the standard logistic distribution has variance $\pi^2/3$. We used a random-effects probit specification to account for the nonindependence of observations within firms and used the reoprob program in the statistical software, STATA. Random effects models split the residual of each observation into a firm-specific residual and the 'usual' residual, and allow for firm-specific variation across years.

MAIN RESULTS

Table 2 displays the results emanating from our random-effect ordered probit models starting from a model with controls (Model 1) and ending with the full model (Model 6). We discuss the results in Table 2 but note that the coefficients in Table 2 have to be considered relative to their marginal effects for each category (displayed in Table 3).

Model 1 displays the effect of a base model with control variables. First, the *Lagged evaluation* increases future evaluations significantly (the marginal effects are positive and significant for two- and three-star categories). By contrast, the longer a restaurant is present in the database, the less likely it is to gain additional credit: the coefficient for *Restaurant age* is significant and negative. The price of the meals appears to be positively and significantly related to external evaluations, as was expected from our interviews (marginal effects positive and significant for two- and three-star categories). In addition, receiving awards such as 'One of the Best French Craftsmen' has positive effects on critics' evaluations. Results show that the older the chefs and the higher their level

of education, the better are the external evaluations. For *Awards, Chef age*, and *Education level*, marginal effects are significant and positive for two- and three-star categories. Period effects indicate that early years were significantly more favorable to gain external support than more recent years. Finally, *Conformer to classical cuisine* is negative and insignificant, indicating that restaurants that focused on classical cuisine have not been penalized in terms of evaluation over the period. However, *Conformer to nouvelle cuisine* has been significantly associated with higher valuations, from both the positive and significant coefficient and marginal effects.

Model 2 adds the effects of code-preserving and code-violating changes. The coefficient of code-preserving changes is positive and significant, giving a first support to Hypothesis 1. However, code-violating changes significantly increase external evaluations, and contradict Hypothesis 2. Model 3 adds the relative changes *vis-à-vis* peers in both categories of change. The coefficient of *Code-preserving changes relative to peers* is positive and significant, supporting Hypothesis 3. *Code-violating changes relative to peers* decrease evaluations (coefficient significant at $p < 0.1$), supporting Hypothesis 4. Model 4 tests the moderating effect of restaurant age. Older organizations are penalized when applying a code-violating strategy, giving credit to Hypothesis 6, but there is no support for Hypothesis 5, which assumed a positive interaction between organizational age and code-preserving changes. Model 5 tests Hypotheses 7 and 8 and their alternative formulations, including the interaction terms between code changes and *Lagged evaluation*. Both have significant negative effects on critics' evaluations, thereby supporting Hypotheses 7alt and 8alt. Model 6 is a full model where all the interaction effects present the same coefficients' direction and significance (except for *Code-violating change × Age*, which becomes insignificant).

In Table 3, we display the marginal effects for the hypothesized variables computed at the means of other variables (Scott Long, 1997). Indeed, without computing the marginal effects, the signs of the coefficients are not sufficient to conclude whether the probability for the middle category is raised or lowered. Marginal effects tell how the probability of being in each star category is affected when the value of the relevant explanatory variable is raised by one unit.

Table 2. Random-effect ordered probit models: effects of code-preserving and code-violating changes on external evaluations

Variable names	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Lagged evaluation	3.66***	3.67***	3.67***	3.68***	3.85***	3.80***
	(0.051)	(0.052)	(0.052)	(0.052)	(0.052)	(0.082)
Restaurant age	−0.065+	−0.086*	−0.093*	−0.037	−0.088*	−0.173*
	(0.041)	(0.042)	(0.046)	(0.057)	(0.043)	(0.082)
Price	0.247***	0.224***	0.225***	0.227***	0.224***	0.238***
	(0.058)	(0.058)	(0.059)	(0.059)	(0.060)	(0.062)
Award	0.217***	0.222***	0.226***	0.221***	0.226***	0.208***
	(0.111)	(0.047)	(0.047)	(0.047)	(0.049)	(0.055)
Chef age	0.313***	0.296***	0.302***	0.295***	0.303***	0.281***
	(0.052)	(0.052)	(0.053)	(0.052)	(0.054)	(0.055)
Education level	0.063*	0.064*	0.065*	0.065*	0.067*	0.119***
	(0.033)	(0.033)	(0.033)	(0.033)	(0.034)	(0.034)
Early period	0.766***	0.796***	0.793***	0.808**	0.812***	0.787***
	(0.137)	(0.138)	(0.138)	(0.138)	(0.140)	(0.147)
Middle period	0.469***	0.469***	0.468***	0.462***	0.474***	0.440***
	(0.074)	(0.074)	(0.074)	(0.074)	(0.075)	(0.078)
Conformer to classical cuisine	−0.048	−0.018	−0.016	−0.015	−0.017	0.020
	(0.062)	(0.063)	(0.063)	(0.063)	(0.065)	(0.070)
Conformer to nouvelle cuisine	0.156*	0.137*	0.139*	0.138*	0.136*	0.139*
	(0.070)	(0.070)	(0.070)	(0.070)	(0.070)	(0.074)
Code-preserving changes at $t-1$		0.072**	−0.057	0.064**	0.217**	−0.045
		(0.027)	(0.071)	(0.079)	(0.070)	(0.116)
Code-violating changes at $t-1$		0.118***	0.339**	0.293***	0.323***	0.698***
		(0.031)	(0.136)	(0.091)	(0.079)	(0.168)
Code-preserving changes relative to peers			0.132*			0.219**
			(0.069)			(0.072)
Code-violating changes relative to peers			−0.227+			−0.334*
			(0.141)			(0.145)
Code-preserving changes × Restaurant age				0.001		0.048
				(0.037)		(0.043)
Code-violating changes × Restaurant age				−0.087*		−0.015
				(0.043)		(0.051)
Code-preserving changes × Lagged evaluation					−0.097*	−0.131**
					(0.043)	(0.045)
Code-violating changes × Lagged evaluation					−0.141**	−0.149**
					(0.050)	(0.053)
Cut-off 1	7.97***	7.99***	8.11***	8.07***	8.27***	8.48***
Cut-off 2	11.69***	11.72***	11.85***	11.79***	12.01***	12.25***
Spells	16 147	16 147	16 147	16 147	16 147	16 147
Log-likelihood	−1683.26	−1674.06	−1671.98	−1672.04	−1668.07	−1855.31
d.f.	10	12	14	14	14	18
LR χ^2 and Δ LR χ^2	3 848***	+25***	+29***	+29***	+33***	+60***

In parentheses, robust standard errors; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; + $p < 0.10$. All significance tests are based on two-tailed tests; Δ LR χ^2 based on comparison with Model 1.

In Table 3, the partial changes in predicted probabilities for the hypothesized effects are based on full Model 6 (Table 2). For example, if *Code-violating change* rises by one unit, all else equal, then the marginal effect shows that the probability of obtaining two stars is raised by 5.14 percent.[3] Table 3 suggests that there is support for effects contrary to Hypothesis 2 because marginal on its code-change strategy. Focusing only for the sake of simplicity on the code-change coefficients, we find a figure of +3.05 percent, which is the sum of the influence of:

code-violating change	$1 \times 5.14\%$
code-preserving changes relative to peers	$+(2-0.8) \times 1.16\%$
code-violating changes relative to peers	$+(1-0.5) \times -1.41\%$
code-preserving changes interacted with the number of past stars	$+1 \times 2 \times -0.84\%$
code-violating changes interacted with the number of past stars	$+1 \times 1 \times -1.10\%$

[3] More precisely, let us consider restaurant A, which did not make any changes the former year and decides to implement a strategy of two code-preserving changes and one code-violating change. Restaurant A has one star and we calculate the increase in probability for A to get two stars based

Table 3.   Marginal effects

Variable names	Coefficients (Model 6)	One star	Two stars	Three stars	Mean (S.D.)
Lagged evaluation	3.80***	−0.2820***	0.2816***	0.0003***	1.19 (0.46)
Restaurant age	−0.173*	0.0020	−0.0021	−0.0002	1.89 (0.69)
Price	0.238***	−0.0167***	0.0166***	0.0001***	4.72 (0.90)
Award	0.208***	−0.0180***	0.0179***	0.0001**	0.25 (0.46)
Chef age	0.281***	−0.0273***	0.0272***	0.0001***	1.42 (0.53)
Education level	0.119***	−0.0049*	0.0048*	0.0001*	1.22 (0.65)
Early period	0.787***	−0.1001***	0.1000***	0.0001**	0.25 (0.43)
Middle period	0.440***	−0.0412***	0.0411***	0.0001***	0.42 (0.49)
Conformer to classical cuisine	0.020	0.0017	−0.0016	−0.0001	0.24 (0.43)
Conformer to nouvelle cuisine	0.139***	−0.0132*	0.0131*	0.0001*	0.11 (0.32)
Code-preserving changes at $t − 1$	−0.045	−0.0056	0.0055	0.0001	0.80 (0.90)
Code-violating changes at $t − 1$	0.698***	−0.0515***	0.0514***	0.0001***	0.54 (0.75)
Code-preserving changes relative to peers	0.219**	−0.0117*	0.0116*	0.0001*	0.00 (0.89)
Code-violating changes relative to peers	−0.334*	0.0142+	−0.0141+	−0.0001+	0.01 (0.72)
Code-preserving changes × Restaurant age	0.048	0.0006	−0.0006	−0.0000	1.64 (1.98)
Code-violating changes × Restaurant age	−0.015	0.0051	−0.0051	−0.0001	1.10 (1.63)
Code-preserving changes × Lagged evaluation	−0.131**	0.0085**	−0.0084**	−0.0001*	0.98 (1.28)
Code-violating changes × Lagged evaluation	−0.149**	0.0111***	−0.0110***	−0.0001***	0.66 (1.04)

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; + $p < 0.10$.

effects are positively and significantly related to restaurants with more than one star, support for Hypotheses 3 and 4, and support for Hypotheses 7alt and 8alt.

We conducted a series of robustness checks. First, we tested for a number of other controls and found them insignificant and so did not retain them in the models. These variables were: (a) '*Distance from large city*' (expressed in kilometers and logged) to control for location effects; (b) the number of same status–same region competitors ('*Competitors*') to evaluate the competition effect on evaluations; (c) '*Restaurant attractiveness*' to integrate the fact that some restaurants have some peculiar attractive features (situated near a lake or being an historical place) that may favorably bias evaluations; d) '*Vertical integration*', i.e., the presence of rooms in the restaurants

signaling a vertical integration strategy (housing and food) that may have an impact on evaluations; (e) the presence of highways and other infrastructures that ease the access to the restaurants; and (f) the five-year average migration rates of counties where restaurants were located to account for demographic and economic attractive places.

Second, we included in our models dummies for left-censored observations and found it to be insignificant. We also included a dummy variable for no-star restaurants to rule out attrition bias—this dummy was negative and significant, but the other results remained unchanged. Additionally, we also ran models with robust standard errors and fixed-effects ologit models and found similar patterns of results as with the random-effect probits presented in Tables 2 and 3. We do not report these results in the interest of brevity.

Third, as Barnett and Carroll (1995) suggest, we controlled for process effects of change via (1) the '*cumulative number of code-preserving changes*' and '*cumulative number of code-violating changes*' since entry into the database to account for the frequency-dependent effects of changes; and (2) the '*time since last code-preserving change*' and '*time since last code-violating change*' to control for the differences in restaurant–chef dyads' experience of change. Coefficients for these variables were not significant.

Fourth, we also conducted a number of other robustness tests that we do not report for the sake of brevity. We interacted migration rates, competition, access (highways), and distances with the code-change variables without finding significant effects. We tested further an interaction between *Restaurant age* and both code-changes *relative to peers*. The results confirm that age moderates negatively the code-violating effect on external evaluations and has no effect on the code-preserving changes. We tested also the interaction of past evaluations with both code changes relative to peers. Results are similar to those presented in Table 2 for code-violating changes, while the coefficient for code-preserving changes prior to evaluation is insignificant. A last interaction between periods and code changes did not present significant effects, suggesting that there is no path-dependent effects between cuisine adoption and code-change effects on external evaluation over our period of study.

CODE CHANGES AND STRATEGIC GROUPS

In this section, we offer additional insights into the relation between code changes and strategic groups. Indeed, some findings from Tables 2 and 3 suggest that conformers to the nouvelle cuisine code enjoy significantly more favorable external evaluations than both conformers to the classical cuisine code and nonconformers. The presence of oppositional codes and conformers vs. 'straddlers' speaks to the literature on strategic groups (Cool and Schendel, 1987; Nath and Gruca, 1997). Conformers to a code could be assimilated with one strategic group whereas straddlers could constitute another group.

Recent research holds that strategic groups have identities, that is, a set of shared understandings among managers about the central, distinctive, and enduring characteristics of the group (Peteraf and Shanley, 1997). In this line of reasoning, members identify with the strategic group, and the boundaries of the group are maintained by historical and institutional processes. External observers also categorize organizations into groups on the basis of shared domains, resources, and shared recipes. Thus, each strategic group is characterized by domain consensus and differs in performance (Ketchen *et al.*, 1997) and reputation (Ferguson *et al.*, 2000).

However, we know little about the mechanisms that translate conformity to a strategic group's identity into a favorable publicly recognized standing for organizations. Peteraf and Shanley (1997: 179) propose that firms that identify more strongly with their strategic group will be more effective than firms that are more loosely tied, but remain silent about how and why such identification culminates in improved public standing or status for organizations. Moreover, extant research devotes little attention to organizational changes. McNamara *et al.* (2003) note that the positioning of firms within strategic groups needs to be studied dynamically over time, and underline the need to explore contingencies (such as age and institutional pressures) affecting the relationship between positioning and outcomes such as favorable standings. Our research setting provides the opportunity to test the impact of alternative code changes on code conformers' and straddlers' external evaluations.

We therefore proceeded to additional tests presented in Table 4 related to the impact of code changes on three strategic groups.[4] Model 7 lists the results of code changes on external evaluations for conformers to the classical cuisine code, Model 8 lists the results for conformers to the nouvelle cuisine code, and Model 9 for the straddling dyads ('straddlers'). Eventually, Models 10 through 12 reproduce the full models for the three strategic groups. For conformers to classical cuisine, code-violating does not contribute to improve external evaluations, but code-preserving changes impact positively and significantly external evaluations, and this relationship is negatively moderated by the lagged reputation (Model 10).

[4] We do not present the tables for the marginal effects as our objective is not to determine the relative impact of explanatory variables on each star category but more simply to seek evidence for intergroup differences. Note that we checked that the restaurant–chef dyads stay true to their identity and that there is no significant in-and-outs across categories.

By contrast, for conformers to nouvelle cuisine, both code-preserving and code-violating changes foster external evaluations (Model 8). In this case, code-violating may be a way to attest the mastery in both codes, and a way to hedge identification and categorization risks associated with code-violating changes. When taken in concert with interactions however, the direct effects of code changes fade away (Model 11). Finally, in Models 9 and 12, code-violating changes enhance significantly straddlers' external evaluations (but not code-preserving changes), thereby suggesting that straddlers may be immune from the penalties of code-violating change.[5] Overall, code conformers and straddlers do not benefit identically from code-preserving and code-violating changes.

DISCUSSION

In this paper, we tackle the question of the impact of an organization's choices on the social valuation of its strategy by expert evaluators. Our study provides insight into the diverse nature of code changes, and suggests that firms should change their codes strategically in order to increase their evaluations by third parties. Below, we discuss the implications of our study for research on strategic change, strategic groups, and strategic positioning.

Strategic change

As mentioned at the outset of the paper, there has been disagreement about the extent to which domain consensus acts as a constraint on

---

[5] A reviewer suggested that we recalculate the code change variables as if 'straddling' was a code in itself. From this perspective, code violating for straddlers means merely becoming a conformer to either 'pure' cuisine. We calculated the new variables as mentioned (*Recalculated code-preserving change* and *Recalculated code-violating change*), aware of the fact that this recalculation represents an extreme case of variable construction: (a) the new variables do not take into account straddlers' dish distribution (a trio of specialties composed of one classical cuisine and two nouvelle cuisine dishes is then equal to a trio of specialties composed of two classical cuisine and one nouvelle cuisine dishes); (b) such a construction of the variables changes the level where code violation applies (from the dish to the dyad level); and consequently (c) the recalculated variables stringently minimize the presence of code-violating changes. In models that we do not report for the sake of brevity, results are unchanged for both code conformers. However, for straddlers, the coefficient for *Recalculated code-violating change* is negative and marginally significant. Therefore, depending on one's empirical research setting and on whether straddling can be considered a code in itself, caution is required when constructing code-violating variables—in particular for the straddling category.

organizational change (Fox-Wolfgramm *et al.*, 1998) and the extent to which conformity or deviance is beneficial to organizations (Zajac and Kraatz, 1993; Deephouse, 1999). Empirical research has assumed that organizations either make core or peripheral changes, portray organizations as fundamentally inert or flexible, and focus on performance/survival as the outcomes of interest.

In this paper, we did not ascribe one type of change to an organization, fix an organization's identity in essentialist terms (e.g., inert vs. adaptive), nor focus primarily on performance. We drew on a code perspective of change. Each organization can adopt code-preserving changes, code-violating changes, or a combination of both changes, and position itself in an evolving but coded environment. In this context, external evaluations by critics and raters are of the utmost importance as sanctions of an organization's social positioning. By looking at strategic changes from a code-preserving and code-violating perspective, this study seeks to avoid the entrenched debate opposing isomorphism and 'adaptationism' (Zajac and Kraatz, 1993; Deephouse, 1996; Dacin, 1997; Kondra and Hinings, 1998; Kraatz and Zajac, 1996; D'Aunno *et al.*, 2000; Durand, 2006).

Our results show that code-preserving and code-violating changes, in absolute value, have a positive impact on external evaluations. Polos, Hannan, and Carroll's arguments suggest that infringing organizations are socially penalized and enter into a vicious circle of destabilization and identity loss after a code-violating action (Polos *et al.*, 2002; Hannan *et al.*, 2004). We found, however, that code-violating changes enhanced external evaluations in the context of French cuisine, where the oppositional codes had their legitimacy almost independently of their rate of diffusion. Moreover, we looked at whether the code-preserving and code-violating changes made by a firm exceed or lag behind changes undertaken by peers to discern the pay-offs to deviance. The findings show that while firms that undertake more code-preserving changes than rivals gain better external evaluations, by contrast, firms that undertake more code-violating changes than rivals suffer as would be predicted from Polos, Hannan, and Carroll's theory on this aspect.

One implication is that there may be a threshold effect on the social advantages derived from code-violating changes. A firm that infringes the codes systematically respects neither the signals it

Table 4. Random-effect ordered probit models: additional models by strategic groups

Variable names	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Classical cuisine	Nouvelle cuisine	Straddlers	Classical cuisine	Nouvelle cuisine	Straddlers
Lagged evaluation	3.957***	3.487***	3.676***	4.102***	3.456***	3.832***
	(0.165)	(0.148)	(0.062)	(0.199)	(0.259)	(0.096)
Restaurant age	−0.395***	0.007	−0.062	−0.353*	−0.170	−0.006
	(0.112)	(0.116)	(0.050)	(0.170)	(0.247)	(0.085)
Price	0.250$^+$	0.121	0.247***	0.250$^+$	0.151	0.251***
	(0.141)	(0.161)	(0.074)	(0.143)	(0.163)	(0.074)
Award	0.287**	0.138	0.211***	0.304**	0.151	0.207***
	(0.111)	(0.134)	(0.054)	(0.113)	(0.136)	(0.055)
Chef age	0.419***	0.286*	0.283***	0.429***	0.275*	0.288***
	(0.138)	(0.129)	(0.064)	(0.138)	(0.130)	(0.064)
Education level	0.081	0.047	0.065$^+$	0.098	0.051	0.054
	(0.097)	(0.086)	(0.038)	(0.097)	(0.086)	(0.038)
Early period	0.559$^+$	0.985*	0.838***	0.550$^+$	1.033*	0.876***
	(0.344)	(0.441)	(0.175)	(0.344)	(0.456)	(0.176)
Middle period	0.519*	0.488**	0.417***	0.505*	0.513**	0.425***
	(0.239)	(0.185)	(0.090)	(0.239)	(0.190)	(0.090)
Code-preserving changes at $t-1$	0.198***	0.135$^+$	0.027	0.295*	0.279	−0.150
	(0.065)	(0.075)	(0.034)	(0.165)	(0.311)	(0.141)
Code-violating changes at $t-1$	0.052	0.170*	0.119***	0.433	0.165	0.739***
	(0.100)	(0.081)	(0.037)	(0.516)	(0.505)	(0.186)
Code-preserving changes relative to peers				0.238	−0.245	0.185*
				(0.204)	(0.195)	(0.082)
Code-violating changes relative to peers				−0.298	0.044	−0.224
				(0.402)	(0.488)	(0.168)
Code-preserving changes × Restaurant age				−0.026	0.082	0.029
				(0.107)	(0.118)	(0.053)
Code-violating changes × Restaurant age				−0.079	0.068	−0.096$^+$
				(0.169)	(0.130)	(0.059)
Code-preserving changes × Lagged evaluation				−0.211$^+$	−0.053	−0.050
				(0.120)	(0.117)	(0.055)
Code-violating changes × Lagged evaluation				0.046	0.108	−0.142**
				(0.184)	(0.148)	(0.061)
Cut-off 1	8.18***	7.36***	8.18***	8.45***	7.32***	8.49***
Cut-off 2	12.00***	10.87***	11.94***	12.26***	10.84***	12.26***
Spells	3837	1807	10 503	3837	1807	10 503
Log-likelihood	−297.83	−250.84	−1136.51	−295.31	−249.00	−1119.50
LR χ^2	989.37	741.51	2959.78	994.43	745.19	2993.80
Δ LR χ^2	+9.33***	+6.15**	+13.81***			

In parentheses, robust standard errors; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; $^+$ $p < 0.10$. All significance tests are based on two-tailed tests; Δ LR χ^2 based on comparison with baseline model without code changes.

sent in the past nor the set of rules representative of legitimate actions. Evaluating agencies exert a sort of social control on infringements that preserve the codes as identifiable for firms and clients. A second finding is that high-status organizations do not benefit from change as much as lower-status organizations. Moreover, although the evidence was weaker, we found that older organizations benefited less from changes; so change favors the young upstart more than the old and established incumbent, thereby underscoring the extent to which domain consensus constrains the established incumbent.

Further research is required in order to attest the generalizability of these findings. In particular, in our setting, nouvelle cuisine arose as a code in opposition to classical cuisine due to an identity movement (Rao, Monin, and Durand, 2003). In such cases, where there is substantial experimentation and innovation, the ability of critics to patrol the borders of codes is limited. In other industries, where experimentation is less abundant, critics may have more leverage to police the borders of codes. For instance, in cultural industries with archives (e.g., recorded music or fashion) and more broadly in industries with objective performance criteria, producers may have less options to benefit from code violations.

This study should also be extended to different contexts where more than two legitimate codes exist and where code legitimacy is more variable. Absolute and relative code changes may affect external evaluations differently in those different contexts. In our empirical context, we could not test further the relationships between external evaluations and performance. From our interviews, we know that sales are dramatically increased (decreased) on the aftermath of upgrade (downgrade). However, no direct link can be established between sales and profitability in these elite restaurants.[6] Therefore, another vein of future research deals with the relationships between code-change strategy, external evaluations, and profitability.

Strategic groups

Our results from Models 7 through 12 (Table 4) show that historical conformers are better off with code-preserving changes, promoters of a newer code should innovate in their own register but can safely borrow from tradition, while straddlers are apt to play cautiously the game of code importations. Studying strategic groups from a code-change perspective sheds light on two important issues. First, the organization's conformity to its strategic group identity has been assumed to be a predictor of its public standing and performance. Our findings extend Peteraf and Shanley (1997)'s arguments to intermediate outcomes such as external evaluations that subsequently may translate into performance criteria (Ferguson *et al.*, 2000).

Second, the code perspective on change may contribute to the strategic group literature by providing a mechanism that relates organizational change to organizational outcomes, i.e., whether and how code changes transfer into status increase or decline. In contrast to prior work on strategic groups that has focused on mobility barriers and the difficulty of intergroup mobility, our

paper draws attention to optimal distinctiveness. In an influential paper in social psychology, Brewer (1991) argued that individuals want to be optimally distinctive—they want to be similar to others, but also be different. Our study suggests that organizations that belong to strategic groups can gain the benefits of assimilation, but they also need to distinguish themselves within the strategic group. In this context, an additional implication is that code-preserving and code-violating changes are subtle mechanisms to position an organization for optimal distinctiveness, and stand out in stark contrast to more binary mechanisms such as entry or exit from new market segments. While care should be taken to generalize the findings to other contexts with multiple codes and groups, this study adds to the recent literature on strategic groups. And again, the pivotal role of third parties as attributing social rewards is critical, underscoring the importance of a strategic social positioning for a firm seeking positive external evaluations.

Strategic social positioning

Our study also underscores the importance of the social positioning of organizations. Reported research has treated competences and skills as the primary limitations on efforts to change the scope of a firm's product offerings (Barney, 1986; Teece, Pisano, and Shuen, 1997). As a result, change has been treated as 'culture free,' and there has been little attention devoted to how wider cultural constraints operating via social codes enforced by external evaluators constrain changes in the scope of the firm. This paper shows that strategic changes do not appear in a social and cultural void—instead, they are coded and evaluated by external observers. Characterizing strategic changes as either code-preserving or code-violating enables us to understand how the market is a category structure that constrains the behavior of organizations (Zuckerman, 1999). Ordering mechanisms (such as awards, rankings, and external evaluations) play a crucial role in constituting status laddering. Extra-organization agencies participate to the social stratification, endowing or severing status to competing organizations. Accreditation agencies, watchdog associations, and rating agencies, to cite a few examples, do more than provide an accepted evaluation on product qualities; they socially confer a position in terms of organizational status (Rao, 1998; Zuckerman,

---

[6] Our informants suggested that an upgrade—a one-star increase—increases attendance by 40 percent, and the effect is immediate. Public starred chefs such as Paul Bocuse, Pierre Gagnaire, Alain Ducasse or the late Loiseau have all mentioned this magic figure of +40%. These figures hold for Paris and for province restaurants, and for any kind of upgrade. The effect of a downgrade—a one-star decrease—varies. Chefs suggest that the effect is symmetrical (−40%) but the effect differed in time, and a few chefs have told us that it took five years to return to the former level. Overall, while the link between upgrade (or downgrade) and sales is direct, it is less so the case between upgrade (or downgrade) and profitability.

1999) by assessing whether organizations conform to codes. By characterizing strategic changes as either code-preserving or code-violating and showing how external evaluators assess the changes, our study highlights the sociocultural content of changes, and how the sociocultural boundaries of a firm are restricted by domain consensus.

Some scope conditions of our study deserve mention. First, we may have studied small-sized organizations that tend to change more than larger organizations. Second, we studied a cultural industry rather than a manufacturing or a high-technology industry where knowledge can be more codified and evaluation of changes is likely to be more premised on technical quality criteria than on fit with cultural categories. Then, changes in cuisine were driven only marginally by technological innovations. As a consequence, the results should be generalized with caution to technology-based industries where external evaluations might be related more closely to technological prowess and mastery. Third, our results also need to be interpreted with caution because we studied the effect of dish changes given the constraint on the number of signature dishes chefs are allowed to nominate, the secrecy of the evaluation process, and the number of stars they can receive. Finally, our empirical context presents an archetypal situation where two codes are legitimate from their origin and almost independently of their diffusion. This is due to the particulars of French history and intellectual discourses related to the gastronomy industry. Therefore, other studies should clearly state the nature of the prevalent codes and their respective influences with organizational adoption and diffusion. Overall, these limitations only reinforce the need to extend our study to other fields and industries and to study how broader cultural constraints restrict the scope of the firm. One such possibility is to ascertain how social movements seek to enforce new codes on the conduct of organizations and even limit their technological choices, and to detail how organizations respond to such enforcement efforts.

ACKNOWLEDGEMENTS

REFERENCES

Amburgey T, Kelly D, Barnett W. 1993. Resetting the clock: the dynamics of organizational change and failure, *Administrative Science Quarterly* **38**(1): 51–73.

Barnett WP, Carroll GR. 1995. Modelling internal organizational change. *Annual Review of Sociology* **21**: 217–236.

Barnett WP, Hansen MT. 1996. The red queen in organizational evolution, *Strategic Management Journal*, Summer Special Issue **17**: 139–157.

Barney J. 1986. Strategic factor markets: expectations, luck, and business strategy. *Management Science* **32**: 1231–1241.

Brewer MB. 1991. The social self: on being the same and different at the same time. *Personality and Social Psychology Bulletin* **17**(5): 475–482.

Child J. 1997. Strategic choice in the analysis of action, structure, organization, and environment: retrospect and prospect. *Organization Studies* **18**(1): 43–76.

Cool K, Schendel D. 1987. Strategic group formation and performance: the case of the U.S. pharmaceutical industry, 1963–1982, *Management Science* **33**(9): 1102–1124.

D'Aunno T, Succi M, Alexander JA. 2000. The role of institutional and market forces in divergent organizational change. *Administrative Science Quarterly* **45**(4): 679–703.

Dacin T. 1997. Isomorphism in context: the power and prescription of institutional norms. *Academy of Management Journal* **40**(1): 46–81.

Deephouse DL. 1996. Does isomorphism legitimate? *Academy of Management Journal* **39**(4): 1024–1039.

Deephouse DL. 1999. To be different or to be the same: it's a question (and theory) of strategic balance. *Strategic Management Journal* **20**(2): 147–167.

DiMaggio PJ, Powell WW. 1983. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* **48**(2): 147–160.

Dranove D, Peteraf M, Shanley M. 1998. Do strategic groups exist? An economic framework analysis. *Strategic Management Journal* **19**(11): 1029–1044.

Durand R. 2006. *Organizational Evolution and Strategic Management*. Sage: London, U.K.

Eisenhardt K. 1989. Building theories from case study research. *Academy of Management Review* **14**(2): 532–550.

Escoffier A. 1993. (Original 1903, First English Edition 1907). *Le Guide Culinaire*. Flammarion: Paris.

Ferguson P. 1998. A cultural field in the making: gastronomy in 19th–century France. *American Journal of Sociology* **104**(3): 597–641.

Ferguson P. 2004. *Accounting for Taste: The Triumph of French Cuisine*. University of Chicago Press: Chicago, IL.

Ferguson TD, Deephouse DL, Ferguson WL. 2000. Do strategic groups differ in reputation? *Strategic Management Journal* **21**(12): 1195–1214.

Fischler C. 1993. *L'Homnivore*. Odile Jacob: Paris.

Fox-Wolfgramm S, Boal K, Hunt J. 1998. Organizational adaptation to institutional changes: a comparative study of first-order changes in prospector and defender banks. *Administrative Science Quarterly* **43**(1): 87–126.

Greene W. 2005. *Econometric Analysis*. Pearson Education: Upper Saddle River, NJ.

Greve H. 1999. The effect of core change on performance: inertia and regression toward the mean. *Administrative Science Quarterly* **44**(3): 590–614.

Greve H, Taylor A. 2000. Innovations as catalysts for organizational change: shifts in organizational cognition and search. *Administrative Science Quarterly* **45**(1): 54–80.

Hannan MT. 1997. Rethinking age dependence in organizational mortality: logical formalizations. *American Journal of Sociology* **104**(1): 126–164.

Hannan MT, Freeman J. 1989. *Organizational Ecology*. Harvard University Press: Cambridge, MA.

Hannan MT, Polos L, Carroll G. 2004. Toward a theory of forms: similarity and categorization. Working paper, Nagymaros Group on Organizations.

Karpik L. 2000. Le Guide rouge Michelin. *Sociologie du Travail* **42**(3): 369–389.

Ketchen DJ, Combs JG, Russell CJ, Shook C, Dean MA, Runge J, Lohrke FT, Naumann SE, Hapstonstahl DE, Baker R, Bernestein BA, Handler C, Honig H, Lamoureux S. 1997. Organizational configurations and performance: a meta-analysis. *Academy of Management Journal* **40**(1): 223–240.

Kondra AZ, Hinings CR. 1998. Organizational diversity and change in institutional theory. *Organization Studies* **19**(5): 743–767.

Kraatz MS, Zajac EJ. 1996. Exploring the limits of the new institutionalism: the causes and consequences of illegitimate organizational change. *American Sociological Review* **61**(5): 812–836.

McKelvey RD, Zavoina W. 1975. A statistical model for the analysis of ordinal level dependent variables. *Journal of Mathematical Sociology* **4**: 103–120.

McNamara G, Deephouse DL, Luce RA. 2003. Competitive positioning within and across a strategic group structure: the performance of core, secondary, and solitary firms. *Strategic Management Journal* **24**(2): 161–181.

Nath D, Gruca TS. 1997. Convergence across alternative methods for forming strategic groups. *Strategic Management Journal* **18**(9): 745–760.

Neirinck E, Poulain JP. 1988. *Histoire de la Cuisine et des Cuisiniers: Techniques Culinaires et Pratiques de la Table*. Editions Jacques Lanore: Paris.

Oliver C. 1991. Strategic responses to institutional processes. *Academy of Management Review* **16**(1): 145–179.

Peteraf M, Shanley M. 1997. Getting to know you: a theory of strategic group identity. *Strategic Management Journal*, Summer Special Issue **18**: 165–186.

Phillips D, Zuckerman E. 2001. Middle-status conformity: theoretical restatement and empirical demonstration in two markets. *American Journal of Sociology* **107**(2): 379–429.

Podolny JM. 1993. A status-based model of market competition. *American Journal of Sociology* **98**(4): 829–872.

Polos L, Hannan MT, Carroll GR. 2002. Foundations of a theory of social forms. *Industrial and Corporate Change* **11**(1): 85–115.

Rao H. 1994. The social construction of reputation: contests, credentialing and legitimation in the American automobile industry 1895–1912. *Strategic Management Journal*, Winter Special Issue **15**: 29–44.

Rao H. 1998. Caveat emptor: the construction of nonprofit consumer watchdog organizations. *American Journal of Sociology* **103**(4): 912–961.

Rao H, Monin P, Durand R. 2003. Institutional change in Toque Ville: nouvelle cuisine as an identity movement in French gastronomy. *American Journal of Sociology* **108**(4): 795–843.

Scott Long J. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Sage: Thousand Oaks, CA.

Singh J, Tucker D, House R. 1986. Organizational legitimacy and the liability of newness. *Administrative Science Quarterly* **31**(2): 117–193.

Teece D, Pisano G, Schuen A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* **18**(7): 509–535.

Thompson JD. 1967. *Organizations in Action*. McGraw-Hill: New York.

Van de Ven A, Poole MS. 2001. Field research on processes of organizational change. In *Companion to Organizations*, Baum JAC (ed.). Blackwell: London; 867–888.

Washington M, Zajac E. 2005. Status evolution and competition: theory and evidence. *Academy of Management Journal* **48**(2): 281–296.

Zajac EJ, Kraatz MS. 1993. A diametric forces model of strategic change: assessing the antecedents and consequences of restructuring in the higher education industry. *Strategic Management Journal*, Summer Special Issue **14**: 83–102.

Zuckerman E. 1999. The categorical imperative: securities analysts and the illegitimacy discount, *American Journal of Sociology* **104**(5): 1398–1438.