Conflicting Social Codes and Organizations:  
On How Hygiene and Authenticity Shape Consumer Evaluations of Restaurants*

David W. Lehman (University of Virginia)  
Balázs Kovács (University of Lugano)  
Glenn R. Carroll (Stanford University)

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*All authors contributed equally to this project; names are listed in reverse alphabetical order. 
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ABSTRACT

Institutional theory highlights the spread of norms of rationality in organizations and other aspects of contemporary life. Yet rationality does not always spread without friction; in some contexts, individuals act on the basis of other beliefs and values. This paper explores a specific instance of this general issue in the context of restaurants and their diners. We argue that consumers potentially apply either of two different social codes when forming value judgments about restaurants: an apparently rational science-based code of hygiene involving compliance with food safety regulations or a context-activated code of authenticity involving conformity to cultural rules. Following institutional theory, we argue that consumers rely on the former as the default for which compliance is taken for granted. However, drawing on attention-based perspectives of decision-making, we go on to argue that violations of the default code recede in importance when the authenticity code is activated. We argue further that the willingness to override the default code varies systematically by consumer domain enthusiasm and organizational niche width. These arguments are supported by statistical analysis that combines 724,265 consumer reviews from Yelp.com and 52,740 food safety inspections conducted by the Los Angeles County Department of Public Health from 2004-2011.

Keywords: social codes, institutions, regulatory compliance, authenticity, domain enthusiasts, niche width, consumer perceived value, restaurants, health grades
INTRODUCTION

For several years in the early 1980s, county health inspectors in Los Angeles began issuing citations to a number of Chinese restaurants and retail food shops for violating the California Health and Safety Code. The citations stemmed from the roast ducks that these establishments had hanging in their places of operation, usually behind glass enclosures in or near the cooking area (Seiler, 1982). By hanging the ducks by their necks at room temperature for an extended time, the restaurant owners were violating the rules about “time and temperature relationships” in food handling and cooking, specifically Article 2, Section 113996 of the Code, which states that “except during preparation, cooking, cooling, transportation to or from a retail food facility for a period of less than 30 minutes…potentially hazardous food shall be maintained at or above 135 degrees, or at or below 41 degrees” (State of California, 2012: 103) The intent of the rule is to prevent the growth of potentially dangerous bacteria that might cause food poisoning or worse. Rules such as this one are based on scientific studies that show that most bacteria cannot survive in extremely high or low temperatures.

In many respects, this story is unremarkable. Charged with enforcing scientifically supported rules to protect the public on food safety issues, government officials were simply doing their job in eliminating a health hazard. Indeed, modern publics insist upon and even demand that their officials ensure the enactment of regulatory procedures to prevent diners from getting sick by eating food with dangerous bacteria. These officials did just this in a competent and thorough manner once they identified the violation.

The story is consistent with a core insight of the institutional perspective on organizations, which holds that justifications of social action relying on technical rationality carry greater weight and meaning than others in the contemporary world (Meyer and Rowan,
1977). Within this view, norms of rationality are seen as driving organizational action and structure in pervasive ways, even when technical rationality is unproven or misleading. Among the justifications of rationality offered by institutional theorists, the role of science is given particular emphasis:

“…we emphasize the extraordinary authority of modern scientific rationalization (not its limitations or virtue). It is a striking feature of contemporary society that science speaks with highly legitimate authority on the widest range of questions” (Drori and Meyer 2006: 40).

Moreover, institutional theorists believe that while science first exerted massive influence in the post WWII period, its impact on culture, knowledge and exchange continues to spread pervasively with globalization:

“…scientization means the permeation of science-like logic and activities, with the underlying principles of universalism, scripts and proaction, to everyday activities. In the age of globalization, cultural rationalization of this sort, rather than state-formation at the world level, has taken a dominant place in world affairs, in particular in regard to transnational rule-making. Scientization is, therefore, worldwide and a global process of rationalization” (Drori and Meyer, 2006: 44).

Yet, the Los Angeles hanging duck story does not end with the unequivocal triumph of science. The crackdown on hanging ducks ignited a backlash. Many Chinese restaurateurs and their patrons had a strongly negative reaction against the citations. Their reactions were rooted in claims that this method of cooking and storing ducks had been in existence for over 4000 years and during that period had fed one of the world’s largest populations. Many in the broader Chinese community took the actions of the regulators as an offensive attack on their cultural
heritage and tradition (Berquist, 1982; Los Angeles Times, 1982). More broadly, the mass media and some politicians latched on to the story and made the officials involved appear to be insensitive idiots who were enforcing overly bureaucratic rules in hare-brained ways (see Renteln, 2004).

This second chapter of the ducks story shows that norms of rationality – including the process of scientization – do not always spread in a smooth linear fashion, as much of institutional theory implies. Rather, it unfolds in fits and starts, with some places, domains, groups and contexts moving to scientific rationalization very quickly and others moving slowly only after long delays. Some even appear not to move at all; witness the popularity of ideas about astrology in many places in the late twentieth century. Moreover, as the hanging ducks story shows, the rational norm may not be fully supported in some contexts and violations may be acceptable or even rewarded.

In our view, institutional theory would be enhanced when coupled with a fuller view of the transition process to rationalized norms, one focused on the micro aspects of acceptance and choice by individuals. Shared by others (c.f. Powell and Colyvas, 2008), this micro-leaning view would complement nicely the widely studied macro process of organizational adoption and diffusion of rationalized structural features (Dobbin et al., 1993; Sutton et al., 1994; Hedström, 1994; Dobbin and Kelly, 2007). Accordingly, in an effort to understand better this process, we study here the restaurant context in greater depth. We do so because, as the hanging ducks story illustrates, it sometimes presents situations where science-based norms of rationality are called into question and not fully supported. We seek to understand the conditions under which individuals choose to deemphasize the science-based norm, or dismiss it altogether, in favor of a less rational alternative. Our hope is that by examining this specific context, we can gather
information and learn about behavior that will facilitate the subsequent development of a more general theory of the diffusion of norms of rationality.

In conceptualizing the research problem, we use the notion of social codes. Social codes can take on various forms (Hannan, Polos and Carroll, 2007). On the one hand, they can be imperative in nature and take on the form of legal obligations that are explicitly spelled out and embedded within the formal laws of society (Edelman, 2004). Alternatively, they can be interpretive in nature and take on the form of cognitive schemata that are socially constructed and embedded within the cultural language of society. Social codes typically possess some kind of (at least superficial) coherency and consistency and, during origination, often require some kind of rationale or evidence, although this may quickly vanish from popular memory. A coherent set of social codes bears some conceptual resemblance to the notion of “institutional logic” (Thornton, 2002). However, a logical system implies a greater degree of coherence, elaboration, and precision than what we think should be inferred from the phenomena we study here – observations of individual behavior in a specific context. Accordingly, we use the more primitive concept of social codes and try to base our interpretations of it on the social meanings used by those individuals we study. Retaining this high degree of focus allows us to analyze and interpret the specific attributions made by individual consumers, a level of detail rare in institutional analysis (Powell and Colyvas, 2008).

The hanging ducks episode describes a context where the two main parties acted on the basis of two different social codes. On the one hand, the health officials who insisted that the ducks be kept elsewhere were invoking an imperative code that relied on a scientific rationale to protect the public from possible sickness brought on by consumption of food riddled with dangerous bacteria. Per institutional theory, we regard such science-based codes of rationality as
default codes in modern social life, codes that are taken for granted and invoked automatically for most people most of the time. As Meyer and Rowan (1977: 343) put it: “In modern societies, the elements of rationalized formal structure are deeply ingrained in, and reflect, widespread understandings of social reality.” On the other hand, the Chinese community members who demanded that ducks be allowed to hang in the open air were acting on an interpretative code that was embedded in their culture and culinary tradition and offered clear direction on how to appropriately prepare and preserve duck for a Chinese meal. The conflict highlights a dilemma: adhering to one code guarantees the violation of the other. Individuals facing such dilemmas are forced to selectively apply one code or the other if they are to continue the engagement and if they are to form a judgment of value (D’Annu et al., 1991; Greenwood et al., 2010).

Conflicting social codes are not unusual in modern life, with its diverse and complex groups and entities (Thornton, 2002; Greenwood et al., 2010). A core sociological question thus concerns how such conflicts are resolved and under what circumstances collective judgment comes to invoke one code instead of another. Of special interest to us here are cases involving the overriding or overlooking of apparently rational default codes, which are activated automatically without active cognition because they involve the enactment of social norms or taken-for-granted aspects of social life. As such, this study focusing on cases in which violations of a default imperative code might be mitigated by another interpretive code. We study a particular instance of this problem in restaurants involving health grades and authenticity in an effort to gain traction on understanding the general conceptual issue. We examine how a restaurant’s compliance with modern food safety regulations shapes consumers’ evaluations of the establishment; we also examine the role that authenticity plays in moderating this relationship. In other words, we ask, how much do consumers devalue a restaurant when it fails
to comply with food safety laws? And, does it matter if the restaurant is regarded as highly authentic, as the hanging ducks story suggests?

In addressing these questions, we draw mainly on institutional theories of organizations (Meyer and Rowan, 1977; Powell and DiMaggio, 1991; Meyer and Scott, 1983). However, because we focus on the decisions individuals make in the real world, we also tend to theories of attention (March and Simon, 1958; Ocasio, 1997). We propose that violation of the imperative food safety code prompts individuals to reassess cues about the organization and consequently focus more attention on the interpretive code of authenticity. That is, when the restaurant is regarded as authentic, we expect consumers to be more likely to forgive violations of the default food safety code. However, when the restaurant is regarded as inauthentic, we expect consumers to be more likely to severely punish the organization during evaluation. We go on to propose that domain enthusiasts, those individuals intensely involved in the food scene, are more willing than other audience members to forgive violations of the default food safety code. We also propose that consumers are more willing to excuse violations of the default code when evaluating organizations that that occupy fewer institutionally defined categories as opposed to multiple categories. Taken together, this study stands to contribute to institutional perspectives of organizations by developing theory about social codes and providing evidence that consumers resolve contradictory codes by selectively applying one code and sidestepping the other. That consumers are willing to selectively apply social codes when making value judgments about organizations has significant implications for understanding how organizations generate value.

We seek to offer these contributions through the examination of social codes in the food and dining context. We analyzed the complete set of ratings that patrons in Los Angeles County voluntarily assigned to restaurants in on-line reviews via the website Yelp.com. We examined
how these ratings are shaped by, on the one hand, information about organizational compliance with food safety regulations as indicated by inspections conducted by the Los Angeles County Department of Public Health and, on the other hand, information about organizational authenticity as indicated by public discourse concerning the restaurant. Our analysis combines archival data about 724,265 consumer reviews with information on 52,740 food safety inspections of 9,734 restaurants from 2004 to 2011.

**THEORY AND HYPOTHESES**

**Social Codes and Valuation**

Organizational success is often driven largely by consumer perceptions of the value offered by a firm’s products or services. Defined as the individual evaluator’s “overall assessment of the utility of a product [or, brand, service, or experience] based on perceptions of what is received and what is given” (Zeithaml, 1988: 14), consumer perceived value is of critical importance in understanding markets because consumers are largely “value-driven” and make choices based on perceptions of value (Sweeney and Soutar, 2001). Moreover, consumers not only make choices about which organizations they wish to patronize, they also influence other consumers’ choices. The widespread use of social media and online consumer ratings sites has apparently increased this effect.

These perceptions of value are shaped by the prevailing social codes. According to Hannan, Polos and Carroll (2007: 21), “a social code can be understood (1) as a set of interpretative signals, as in the ‘genetic code’ and (2) as a set of rules of conduct, as in the ‘penal code.’” In other words, social codes imply both cognitive recognition and imperative standing. Each form plays a key role in shaping consumer perceptions of value. We therefore begin by first positing basic assumptions about the main effects we expect each to exert. We do not specify
them as explicit hypotheses given that prior research has demonstrated these effects to a certain extent.

*Food safety as an imperative code.* The first way that social codes can be understood is as imperatives that are embedded in the legal environments in which organizations operate. The legal environment regulates organizational conduct by prescribing desirable behaviors and proscribing unacceptable ones (Suchman, 1995). These behaviors are outlined in the form of rules that comprise the penal and other codes, which act “presumably on society’s behalf [to take] the initiative to directly modify organizational behavior” (Edelman and Suchman, 1997: 483). The legal system can be viewed as more or less reflecting cultural values. That is, values shared by members of society often get translated into formal laws, rules and regulations that act to constrain organizational actions.

Consumers appear to value highly organizational compliance with legal regulations. Even though organizational compliance with such rules is monitored and enforced by various government agencies, legal scholars tend to view specific legal sanctions as less important than the reputational or market-based impact of noncompliance. As Edelman (2004: 235) explains in discussing the regulatory environment: “The sanctions associated with noncompliance are often insufficient to deter illegal behavior because the risk of legal judgments or administrative fines will often seem minimal in comparison to market-related risks such as product failure. In other words, legal sanctions are usually too small and too slow to affect rational organizational planning.” Noncompliance becomes more about consumer perception, however, when information about compliance is available to consumers and other members of the public. Organizational compliance with regulations should enhance consumer perceptions of value for several possible reasons. First, noncompliance may be interpreted as a rejection of the values or
goals behind the law, which may be in the interests of the public and consumers. Second, noncompliance may suggest a risk to the consumer, society at large or even the environment due to harmful products or unsafe services. Third, noncompliance may be perceived as reflecting a larger problem of managerial incompetence that could apply to aspects of the exchange important to the consumer. For these reasons, consumers can be expected to value more highly those organizations that demonstrate regulatory compliance.

This imperative code of regulatory compliance clearly operates in the restaurant context. In advanced consumer economies, restaurant practices are typically governed by a host of food safety regulations (e.g., State of California, 2012). These laws are promulgated as safeguards based on scientific understanding of bacteria and other potentially harmful microorganisms. The authority accorded science on these matters is usually not disputed and is regarded as unassailable fact, as institutional theorists claim (Meyer and Rowan, 1977). Consumers regard compliance as important and in their best interests and they do not usually question its value or its implementation. Moreover, modern consumers assume that if a restaurant is open and functioning, then its food is safe; consumers take for granted that an operating restaurant has been inspected and approved by health authorities applying rational codes of food safety. In other words, the science-based food safety code is assumed as a default. Satisfaction of the default code thus only gets questioned if the patron is confronted with contradictory evidence, such as rotting food, unclean utensils or rodent droppings on the floor. Likewise, the typical response to news that a restaurant has been put on notice for food safety and health violations tends to be wariness and avoidance.

Many local government agencies now require restaurant owners to post health grades in visible places in the establishment, making compliance and violation increasingly salient to
consumers (Jin and Leslie, 2003). Patrons are thus often fully aware of the extent to which the restaurant complies with food safety laws and can act accordingly, letting the law exert its impact through reputational effects in the market.\(^1\) Given that consumers possess ready access to information about restaurant compliance with taken-for-granted food safety laws based on scientific rationale, we suggest that the public implicitly expects automatic adoption and implementation by food purveyors and restaurants. As a result, we take as a base assumption of our analysis that restaurants that do not comply fully with food safety regulations will be valued less than those that do, a finding suggested by previous empirical research (Jin and Leslie, 2009; Simon et al., 2005).

**Authenticity as an interpretative code.** Social codes can be understood in a second way as cognitive schemata that are embedded in the cultural environments in which organizations operate. Various cognitive schemata may play a role but one that has emerged in recent research as especially important in advanced consumer economies in general, and in the domain of restaurants in particular, is the notion of authenticity (Peterson, 2005, 1997). Authenticity refers to the socially constructed attribution of whether or not an entity is “real” in that it matches the cultural expectations of the particular type (Dutton, 2003). In other words, an entity is “an authentic X if it is an instance of member of the class of Xs; [thus] an interest in authenticity reflects a concern with correct classification” (Davies, 2001: 203). Whereas regulatory compliance refers to an objective interpretation of organizational actions, authenticity refers to a subjective interpretation of organizational identity. Definitive evaluations about whether an entity is authentic or not is virtually impossible because there is no objective answer and

\(^1\) The County of Los Angeles was one of the first municipalities to enforce a public posting law in 1997 and many government agencies around the world from New York City to Singapore now enforce such laws.
interpretations vary across audiences and change across time (Grazian, 2005). These interpretations of authenticity are then embedded within the cultural language of a society. That is, whether or not an organization is generally regarded as authentic is reflected in the rhetoric used by members of society to describe the organization.

Many contemporary consumers also highly value authenticity. Indeed, “authenticity, in its multiple variations, exalted and ordinary, is taken for granted as an absolute value in contemporary life” (Lindholm, 2008: 1). Some have gone so far as to describe a “symbolic economy of authenticity” in which perceptions about authenticity take on “an arbitrarily measured kind of value, like money” (Grazian, 2005: 17). Indeed, “the demand for authenticity…is one of the most powerful movements in contemporary life, influencing our moral outlook, political views and consumer behavior” (Potter, 2010). The underlying assumption of each of these proclamations is that consumers place value in the authentic. Evidence that the authentic carries powerful appeal has been demonstrated in a host of domains, particularly consumer goods such as art, music, beer and wine, coffee and tea, furniture, clothing, neighborhoods, and the list goes on.

This interpretive code of authenticity also clearly operates in the restaurant context. Consumers regularly refer to the concept of authenticity when describing restaurants (Kovacs, Carroll and Lehman, 2012) where words such as “authentic”, “genuine”, “real”, “original”, and the like, are frequently invoked in the rhetoric used to label dining establishments. Similar language has become increasingly prevalent among food critics (Carroll and Wheaton, 2009) and others engaged in public discourse (Jones, Anand and Alvarez, 2005). Moreover, restaurant owners recognize the value that may be accorded them if they are indeed perceived as authentic and restaurateurs, therefore, commonly attempt to project an image of authenticity by conveying
historical ties to meaningful places (Beverland, 2005) or cultivating myths surrounding their products (Guy, 2002).

The role of authenticity in the restaurant context has also become increasingly salient in recent years due to the prevalence of the Internet and social media. Consumers are able to gather much more information about restaurants in attempts to interpret potentially relevant cues and to make attributions about authenticity. In addition, such attributions are quickly conveyed to other people through the use of online restaurant reviews and the like. Websites such as Yelp.com, TripAdvisor.com, Zagat.com and others have quickly gained popularity as a way for consumers to communicate with the masses about their experiences and evaluations of organizations such as restaurants that sell consumer goods; and, business owners, including restaurateurs, are looking to such websites as a possible way to generate value for their business (Luca, 2011).

To summarize, we envision both social codes as operative in the contemporary restaurant context and we take as base assumptions that both codes shape consumer perceptions of value. We thus assume that restaurants which comply with food safety laws and which are regarded as authentic will be highly valued by consumers. (We do conduct falsifiable tests of both assumptions, however.) In other words, compliance with either of the two social codes has an additive effect on consumer perceptions of value. Accordingly, our empirical analysis includes specifications for the main effects of variables related to both codes.

**Overriding the Default Code**

Compliance with each of the two social codes discussed above – the imperative code of food safety laws and the interpretive code of authenticity – stands to enhance consumer perceptions of value. Nonetheless, we suggest that consumers sometimes overlook cues pertaining to one code and focus their attention more exclusively on cues pertaining to the other.
But under what conditions is an individual willing to override one of the codes? We view this as a particularly important and relevant question – both conceptually, in regards to the notion of social codes in general, and contextually, in regards to the restaurant domain in particular – given that multiple social codes may operate at the same time (yet may not necessarily be aligned as the hanging ducks account highlights). Understanding those conditions under which individuals are prone focus their attention on cues pertaining to one code at the expense of the other should shed light on understanding how individuals resolve contradictory social codes.

To address this question, it is important to consider again that the imperative code of food safety operates as the default in the mind of the consumer. Even though consumers are not themselves familiar with all of the food safety laws and their scientific rationale, they do tend to invoke normative science-based defaults in action and response. Meyer and Rowan (1977) emphasized the emergence and dominance of norms of rationality in organizational life, suggesting that rational accounts prevail over others in the modern world, even when they lack a sound factual basis. Scientism is one major theme of this phenomenon and posits that rationalization based on science carries unquestioned authority (Drori and Meyer, 2006). In the modern restaurant domain, rational norms about the handling and consumption of food derive mainly from scientific theories of microorganisms such as germs and bacteria, viewed as dangerous contaminants to be avoided and destroyed. Similar theories came to dominate the practice of medicine in the nineteenth century (Brown, 1979; Brown, 1995; Starr, 1982). Upon entering a restaurant, the default assumption of consumers in advanced economies is that the restaurant complies with the food safety code and that someone – whether it is the owner, the chef, health inspectors, or some combination thereof – has ensured that such compliance has been achieved. In other words, consumers assume that a restaurant is surely hygienic if its doors
are open and the establishment in operation. The food safety code is thus the default, meaning that compliance with food safety regulations is taken for granted as a given.

As the default, the food safety code does not warrant further consideration so long as a restaurant complies with it. As discussed earlier, consumers indeed place value on compliance with the food safety code. However, this valuation is not necessarily one of active or deliberative cognition. Rather, the “default standing [of the code] means that agents do not fully inspect or scrutinize each alleged member but instead fill in the feature values that fit their schemata, unless they see evidence to the contrary” (Hannan, Polos and Carroll, 2007: 78). Moreover, the “defaults get used to fill in the many gaps in perceptions that come about from incomplete information, unobservability, and ambiguity” (p. 79). In other words, consumer perceptions of value are shaped by both the food safety and authenticity codes; however, the former is taken for granted as a given unless otherwise observed and the latter is not fully explored because any lack of clarity about it is implicitly filled in by the default. Consumers naturally employ this valuation process because they, like all other social actors, have limited attention (March and Simon, 1958; Ocasio, 1997) and this process offers obvious efficiencies.

Yet the valuation process is a bit different when the default code is violated: noncompliance with the food safety code prompts consumers to seek more information. Evidence of such noncompliance – whether it be in the form of visible signs of unhygienic practices or in the form of a low food safety grade if such information is available – serves as a trigger for consumers to suspend the default and engage in a closer examination of the establishment in an effort to make their own evaluation (e.g., Loftus et al., 1989; D’Andrade, 1995; Petty and Wegener, 1999). More specifically, a violation of the default code triggers an increased focus of attention on cues related to alternative operative codes.
Attention-based perspectives suggest that consumers find it taxing to consider multiple cues about an organization at once (Zuckerman, 1999) and that social actors tend to manage their limited attention by focusing on those cues that are the most salient (Ocasio, 1997, 2011). So, once activated, the authenticity code can be expected to be more salient than the default food safety code. As Edelman (2004: 241) states: “Legal meaning may derive in part from the actions of those who staff compliance structures and those who interact with these structures, but it is inescapable that legal meaning will incorporate to some extent the logic of the organizational fields within which organizational actors operate.” In other words, the science-based food safety code may lose force if the context provides another attractive code such as authenticity. In particular, the authenticity code is likely to be more specific to the particular setting. In the restaurant domain, the same set of food safety laws apply uniformly to all restaurants within a given jurisdiction. However, an interpretation of a restaurant’s authenticity will consider such factors as its particular cuisine type, certain elements of its unique history and the like. Because of these specific factors, the authenticity code should be more salient once activated and considered more fully by the consumer.

Consequently, the consumer can be expected to relax the default code of food safety and focus greater attention on the authenticity code when the former is in violation. We suggest that this increased salience of the authenticity code and greater focus of attention on it carries two significant implications for the valuation of the restaurant. First, restaurants that do not appear to comply with the authenticity code will suffer from severe devaluation. Violations of both operative social codes will naturally result in an extremely low perception of value by the consumer. Second, restaurants that do comply with the authenticity code will enjoy an enhanced valuation. Even though the food safety code has been violated, the fact that the restaurant is
regarded as authentic will overshadow the violation; and, the violation will perhaps even be used to reinforce attributions of authenticity. In sum, we propose that consumers override the default code of food safety and focus more exclusively on cues about authenticity in light of violations of the former. We therefore advance the following hypothesis.

Hypothesis 1: *Authenticity moderates the impact of compliance with food safety regulations on consumer perceived value such that the impact is attenuated at high levels of authenticity and strengthened at low levels of authenticity.*

**Variations in the Willingness to Override the Default Code**

The willingness to override the default code of food safety may not be uniform. Rather, consumers may be more likely to focus their attention on the authenticity code and form value judgments accordingly, but only when evaluating particular restaurants. Similarly, some individuals may be more likely than others to focus their attention on the authenticity code and temporarily suspend the food safety code.

Such variations in the willingness to override the food safety code can be expected to arise when cues about the authenticity code is perceived as more or less ambiguous. We have argued that consumers, when faced with violations of the food safety code, will focus on the authenticity code because it will be more salient once activated. Social actors indeed tend to focus their attention on that which is most salient (Ocasio, 1997). However, cues about the authenticity code may be considered ambiguous and, in such cases, consumers will be less likely to focus their attention on such cues. Rather, evaluators tend to defer to external influences in judgment formation in light of such ambiguity because it is costly to make sense of such cues and equally costly to search for clarifying information (Bitektine, 2011; Rosch, 1978). We
therefore argue generally that consumers are less willing to override the food safety code when cues about authenticity are potentially ambiguous or uncertain.

Cues about the authenticity code may be especially ambiguous when applied to organizations that operate in several different categories at the same time. Organizations vary in their positioning relative to existing institutional categories (Hsu, Negro and Kocak, 2010) such that some organizations are specialists and only occupy a single category. For example, a restaurant that only serves pizza would be considered a relative specialist because it clearly falls into the category of pizza parlor. Other organizations are generalists and occupy multiple categories. For example, a restaurant that serves both pizza and sushi would be considered a generalist because it spans categories of pizza parlor and sushi bar. An organization’s “niche width” refers to the number of institutional categories that it occupies. There tends to be less ambiguity about how to evaluate the authenticity of a specialist, whereas it is more difficult for consumers to evaluate the authenticity of relative generalists because they display features unlike any of their single-category counterparts (Hsu, 2006; Kovacs and Hannan, 2010).

Consumers will thus be more likely to focus their attention on the authenticity code and temporarily suspend the food safety code to the extent that the restaurant of interest operates in a single or few categories. Alternatively, consumers will be less likely to override the food safety code when evaluating multiple-category organizations because the schemata for evaluating whether or not they are authentic will be more ambiguous and less coherent. We therefore propose that the moderating effect of authenticity in the relationship between food safety compliance and consumer perceived value is stronger to the extent that niche width is narrow.
Hypothesis 2: *Authenticity more strongly moderates the impact of compliance with food safety regulations on consumer perceived value for single-category restaurants than multiple-category restaurants.*

The willingness to override the food safety code may also vary depending on the extent to which the individual consumer has experience in the particular domain. Enthusiasts are audience members who participate heavily in a particular domain and invest time and energy in developing and maintaining the social codes that govern it (Hannan, Polos and Carroll, 2007; Hsu, Negro and Koçak, 2010). They possess a great deal of experience in the domain and are keenly aware of the various dimensions that can and should be considered when evaluating a producer and its offerings. More specifically, enthusiasts are actively engaged in dialogue concerning the authenticity code itself and, through their engagement in the domain, play a critical role in shaping the rhetoric used to make authenticity attributions in public discourse. Because of this experience, we suggest that enthusiasts are more willing to rely on their own subjective interpretations of authenticity and less compelled to rely heavily on the authoritative voice of regulatory officials when forming evaluations of a restaurant.

Domain enthusiasts will thus be more likely than others to focus their attention on the authenticity code and temporarily suspend the food safety code. We therefore propose that the moderating effect of authenticity in the relationship between food safety compliance and consumer perceived value is stronger among domain enthusiasts.

Hypothesis 3: *Authenticity more strongly moderates the impact of compliance with food safety regulations on consumer perceived value among domain enthusiasts than other audience members.*

**DATA AND METHODS**
Study Context

The extent to which consumers place value on each of the two social codes operative in the restaurant context – the imperative code of food safety regulations and the interpretive code of authenticity – was examined through the analysis of online consumer reviews of restaurants in Los Angeles County. As previously discussed, the two social codes specific to the chosen study context are examined in an effort to gain traction on understanding the general conceptual question of how actors interpret cues about multiple social codes with a particular focus on understanding how conflicts in these codes are resolved. The restaurant context was chosen because two different social codes clearly operate in this context and these codes are often misaligned, as illustrated by the hanging duck story as well as other similar accounts in the popular press (e.g., Yi, 2000) and further evidenced by our data analysis. Moreover, the two particular codes, which have been discussed at length above and are examined here, have grown increasingly important in it in recent years. On the one hand, diners have shown a growing concern with hygiene and food safety. This is evidenced by the increased prevalence of laws governing the hygiene practices of restaurants as well as the public embrace of information about compliance with such laws (Jin and Leslie, 2009, 2003). On the other hand, restaurant patrons have also shown an increased appetite for the authentic. This is evidenced by the increased prevalence of authenticity-related words in the media (Carroll and Wheaton, 2009) and public discourse (Jones, Anand and Alvarez, 2005). As such, we believe that the restaurant context and the two social codes examined here offer promise for understanding the larger sociological questions at hand. Data concerning the organizational adoption of these two social codes, as well as consumer assessments of value, was captured from two sources: the Los Angeles County Department of Public Health and Yelp.com; we discuss each in turn.
The Los Angeles County Department of Public Health (LACDPH) is responsible for monitoring and enforcing food safety regulations throughout the County of Los Angeles. The Retail Food Inspection Guide (RFIG) is the official document that outlines the eighty-six rules that apply to all restaurants operating in the County. These rules pertain to a wide range of activities such as food sourcing, cooking temperatures, storage, employee health practices, and so forth. A restaurant’s compliance with these rules is assessed three to four times per year during food safety inspections. A health inspector uses a variety of methods to assess compliance including on-site observations, reviews of records from the restaurant managers, and interviews with the employees. Each rule violation results in a penalty ranging from 0 to 6 points depending on the risk associated with the particular violation. For example, a violation of the rule about proper reheating temperatures entails in a six-point penalty (RFIG §1 Category 4); a violation of the rule about food cross-contamination entails a four-point penalty (RFIG §2 Category 27); a violation of the rule about proper thawing methods entails a one-point penalty (RFIG §3 Category 36); and, a violation of the rule about the presence of appropriate hand washing, no smoking or restroom signs does not entail a deduction of points (RFIG §4 Category 78). The health inspector uses these point deductions to calculate a food safety score ranging from 0 to 100. This score is then translated into a letter grade (A = 90-100 points, B = 80-89 points, C = 70-79 points). Restaurants receiving a score of 69 points or less are not given a letter grade but are rather simply given the numerical score and are required to undergo a follow-up inspection within 30 days; failure to achieve a grade of C or higher during the follow-up inspection results in the closure of the restaurant.²

² A restaurant may re-open its doors after an appeal process and once it has demonstrated the minimal level of compliance with the food safety regulations.
Restaurant compliance with food safety regulations came to the forefront of public attention in 1998 when the County of Los Angeles implemented a public posting law requiring restaurants to post their food safety grades in their facilities for their consumers to see. This public posting law was created in response to several local media reports that highlighted unhygienic food-handling practices at many restaurants throughout the County. The hope of County officials was that increased public awareness of compliance with food safety regulations would enable consumers to incorporate this information into their dining choices and also spur restaurants to comply more fully with the regulations. The grading system and public posting law are widely considered successful in achieving these objectives; subsequent studies have shown that restaurant food safety inspection scores have increased, customers have become more sensitive to the hygiene quality of restaurants, and the number of foodborne illness hospitalizations have decreased significantly (Jin and Leslie, 2003, 2009). These outcomes have prompted other cities around the world to take note and implement similar systems.

“Yelp is an online urban city guide that helps people find cool places to eat, shop, drink, relax and play, based on the informed opinions of a vibrant and active community of locals in the know” (Yelp.com). The website was founded in 2004 in San Francisco and quickly grew to include sites for reviews of restaurants in other cities along the West Coast and now around the globe. Not only does the website aid consumers in discovering desirable places to eat, it also provides them an opportunity to declare their evaluations of places where they have eaten. Yelp generates its reviews through a volunteer process in which any patron can create a Yelp profile and go online to write reviews; anyone can read the reviews without creating a profile. Each review consists of the reviewer identification, the date of the review, a star rating of the restaurant ranging from one to five as an integer number, and a text review of unlimited length.
The website also provides additional information about each restaurant such as its price level, location and cuisines offered. Other scholars have also relied on data from Yelp reviews as a useful way of examining consumer responses to organizations in the restaurant domain (Kovacs and Hannan, 2010; Luca, 2011).

Online consumer review websites such as Yelp.com have provided a forum for public discourse about social constructs such as authenticity to quickly grow in recent years. The concept of authenticity is embedded within cultural language and attributions of authenticity are made when a person uses words that invoke the concept. Most online consumer websites allow consumers to input free text and reviews often contain authenticity-laden language. Yelp provides comprehensive coverage of restaurants and includes a wide range of customer reviews. Alternatives, such as Zagat, Open Table, and Trip Advisor, not only cover fewer restaurants but they also publish reviews from a narrow range of reviewers, often focusing on professional critics rather than allowing any member of society to participate in the discourse.

Data

We sampled all establishments listed in Los Angeles County that met the following four criteria: (1) it was listed in the “restaurant” category on Yelp.com; (2) its Yelp restaurant profile included at least one customer review; (3) it was still operating in October 2011 (the date of sampling; profiles of closed restaurants are typically deleted and more difficult to access if it is not deleted); and (4) its Yelp restaurant profile could be unambiguously matched with a health inspection record from the LACDPH. This sampling design yielded data from a total of 9,734

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3 Although all establishments appearing in Yelp should theoretically have a corresponding record in the Department in Public Health, the matching is often less than clear. For example, Yelp tends to keep one record for hotels, which encompasses all reviews about the hotel, including reviews about the hotel rooms as well as the hotel restaurant(s). The LACDHPH assesses only the
restaurants. In total, these restaurants received 724,265 consumer reviews on Yelp.com and were inspected 52,740 times by the LACDPH between October 2004 and October 2011.\textsuperscript{4}

The data was analyzed at the level of each Yelp review. The 724,265 reviews came from 151,295 unique reviewers and the average number of reviews per reviewer is thus 4.79. The distribution is highly skewed, however, as four individuals wrote more than 400 reviews and one wrote 558 reviews. Restaurants also vary dramatically in the number of reviews they receive. While the average number of reviews per restaurant is 74.49 (standard deviation of 139.53), a few restaurants received thousands of reviews.

**Measures**

*Consumer perceived value* was the dependent variable in each of our models and was measured as the number of stars (out of five) assigned to the restaurant by the reviewer on the focal review. Table 1 offers the distribution of ratings. The average rating is 3.7 and the modal rating is 4.

*Compliance with food safety regulations* was measured as the grade assigned by the LACDPH. The grade (i.e., A, B, or C) rather than score (0-100) was used given that the grade is publicly posted and most readily available to the consumer. Each review is linked to the most recent grade in the system.\textsuperscript{5} Table 2 offers a distribution of food safety grades by Yelp review.

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\textsuperscript{4} Only 709,497 of these reviews are included in the final analysis as a result of the construction of the authenticity variable, which is described later in the following section.

\textsuperscript{5} Only those inspections resulting in the issuance of a grade card (i.e., A, B, or C based on a score ranging from 70-100 points) were included in the sample because very few inspections (i.e., less than 0.1%) resulted in the issuance of a score card (i.e., a score less than 70 points). Restaurants receiving score cards are forced to undergo a follow-up inspection within 30 days. An improvement results in the issuance of a grade card and lack of improvement results in the
Authenticity was captured through a content analysis (Weber 1990) of the free text entered by consumers. To assess the level of authenticity a reviewer assigns to a given restaurant, we searched for authenticity- and inauthenticity-related keywords in the review text. The specific set of keywords used in the content analysis came from the “general authenticity” keyword list developed by Kovacs and colleagues (2012). This study conducted experiments using the “All Our Ideas” framework (Salganik and Levy, 2012) to compile a list of 92 authenticity-related keywords. Each keyword was assigned a value ranging from -1 (highly inauthentic) to 1 (highly authentic) based on consumer responses. For example, the word “scam” scored -.96, while “original” scored .80. We then assigned an authenticity score to each review based on the weighted sum of authenticity-keyword frequencies. To avoid concerns of endogeneity, we followed prior convention (e.g., Kovacs et al., 2012) and do not use the same review to capture both authenticity and perceived value. Rather, a running average of authenticity scores is used for each focal review. In other words, for a review written on a particular date, we used the average authenticity scores given to that restaurant based on all reviews posted before that date, excluding the review at hand.

Domain enthusiasm was measured as the log of the total number of restaurant reviews that the reviewer had written on Yelp between 2004 and 2011.

Niche width was measured as the number of cuisine categories assigned to the restaurant (i.e., American, Mexican, Italian, Chinese, etc.) on Yelp. Category assignment is conducted by the website, sometimes in consultation with the restaurant.

Control variables included the following: (1) Restaurant size was measured as the

restaurant being forced to cease operations and thereby be removed from the dataset. The limited number of inspections in this category produced somewhat unreliable results. However, an alternative set of analysis in which C grades and score cards were combined produced similar results to those presented here.
number of seats in the establishment according to LACDPH records: 0-10 seats (8% of the restaurants), 11-30 seats (23%), 31-60 seats (31%), 61-100 seats (18%), 101-150 seats (9%), 151-200 seats (4%), 201-400 seats (5%), 401+ seats (1%); (2) Restaurant age was measured based on the number of years the restaurant appeared on Yelp; the date of the first review was used as a proxy for the founding date due to the lack of access to actual founding dates of the restaurants; (3) Restaurant price level based on categories from Yelp, indicating the “average price per customer per meal, including tax and tips”: $ denotes “cheap,” (less than $15), $$ denotes “moderate,” ($15-$30) $$$ denotes “expensive,” ($31-$60) and $$$$ denotes “splurge” (above $60); (4) Restaurant chain-affiliation based on the number of restaurants listed with the exact same name; 12.42% of restaurants in the dataset were a part of a chain; (5) Zip code dummies, to control for possible geographical heterogeneities; (6) Total number of prior reviews received by the restaurant; a log transformation was employed due to the skewed distribution of total ratings across restaurants; and, (7) Total number of words in the focal review.

Table 3 shows the descriptive statistics and the pairwise correlations for the main variables.

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Insert Tables 1 – 3 about here.
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Analysis Model

An ordered logit framework was employed given that the outcome variable of interest, star rating, ranges from one to five stars. This framework has been used previously to analyze restaurant ratings (Kovacs and Hannan, 2010). To control for possible heterogeneity among reviewers and restaurants, we report robust standard errors. However, the results presented here
hold with alternative standard error calculations, such as clustering on restaurants or clustering on reviewers.

**FINDINGS**

Table 4 presents the estimates of the ordered logit regression equations of Yelp ratings used to test Hypothesis 1 as well as the base assumptions that consumers place value on those restaurants that comply with food safety laws as well as those that are regarded as authentic. Model 1 includes indicator variables for A and B grades; a C grade serves as the omitted baseline in the model. As expected, restaurants tended to receive higher ratings to the extent that their health grades were higher (Model 1: grade A $\beta = 0.238, p < .01$; grade B $\beta = 0.143, p < .01$), even after restaurant-level control variables are included in the model (i.e., price, size, age and number of reviews). The first baseline assumption thus holds that consumers place value in compliance with the imperative code of food safety regulations. Model 2 includes the authenticity score for the focal restaurant as well as a control for the total number of words entered in the focal review. As expected, restaurants regarded as authentic tend to receive higher ratings (Model 2: authenticity score $\beta = 1.137, p < .01$). The second baseline assumption thus holds that consumers place value in compliance with the interpretive code of authenticity. Moreover, the effects for health grades (grade A $\beta = 0.253, p < .01$; grade B $\beta = 0.155, p < .01$) and authenticity ($\beta = 1.143, p < .01$) remain significant when included together in the same model (Model 3).

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Insert Table 4 about here.

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Hypothesis 1 is the core hypothesis in the study; it proposes an interaction between authenticity and health grades such that the impact of health grades on consumer perceived value
is attenuated at high levels of authenticity and strengthened at low levels of authenticity. As shown in Model 4, the interaction terms are indeed negative and significant (grade A × authenticity $\beta = -0.459, p < .05$; grade B × authenticity $\beta = -0.489, p < .05$). Figure 1 presents a plot of these interactions and aids in the interpretation of the interactions. A restaurant with a C grade received on average 0.33 fewer stars on Yelp than a restaurant with an A grade. However, this effect is cancelled out if the restaurant is generally regarded as highly authentic. For example, a restaurant with a C grade and an authenticity score of .8 or higher is predicted to receive a Yelp rating comparable to or higher than a restaurant with an A grade and the same authenticity score. Alternatively, a restaurant with a C grade and an authenticity score less than 0.03 is predicted to receive a Yelp rating 3.26, which is significantly lower than a restaurant with an A or B grade and the same authenticity score. In sum, Hypothesis 1 is supported.

------------- Insert Figure 1 about here. --------------

Table 5 presents the ordered logit regression equations of Yelp ratings used to test Hypotheses 2 and 3. In an effort to reduce issues of multicollinearity among predictors and to ease interpretation, we employ a split-sample approach (Hoetker, 2007). As such, each of the models in Table 5 is a split-sample version of Model 4 in Table 4.

------------- Insert Table 5 about here. --------------

Hypothesis 2 posits that the interaction effect between food safety grades and authenticity will be stronger for single category restaurants than those restaurants occupying multiple institutional categories. Model 5 includes those reviews for single-category restaurants (e.g., a restaurant that serves only Chinese food) whereas Model 6 includes those reviews for multiple-
category restaurants (e.g., a restaurant that serves Chinese and Indian food). As expected, the interaction effects are stronger in Model 5 (grade A × authenticity $\beta = -0.658, p < .05$; grade B × authenticity $\beta = -0.596, p < .10$); the interaction terms are not significant in Model 6. These two models taken together indicate that consumers are more willing to override the food safety code when evaluating single-category restaurants than when evaluating their multiple-category counterparts. Hypothesis 2 is thus supported.

Hypothesis 3 posits that the interaction effect will be stronger among domain enthusiasts. Models 7 and 8 thus split the sample according to the median number of reviews such that Model 7 includes those reviews for which the focal reviewer had conducted fewer than the median number of reviews (i.e., 19 reviews or fewer) where as Model 8 includes those reviews for which the focal reviewer had conducted more than the median number of reviews (i.e., more than 19 reviews). As expected, the interaction effects are stronger in Model 8 (grade A × authenticity $\beta = -1.061, p < .01$; grade B × authenticity $\beta = -1.008, p < .01$); the interaction terms are not significant in Model 7. These two models taken together indicate that domain enthusiasts are more willing than other audience members to override the food safety code and focus on the authenticity code. Hypothesis 3 is thus supported.

In an effort to test the robustness of the above results, we tested whether the corresponding interactions in the split sample models (i.e., Models 5 & 6 and Models 7 & 8) are significantly different from each other (Clogg, Petkova and Hariton, 1995); all coefficients in each relevant pair were indeed different from each other ($p < .01$), thereby lending even further support for the hypotheses and offering greater faith in the reported findings.

**Auxiliary Analysis**
We also conducted auxiliary analysis that we believe complement the hypothesis tests outlined above. Specifically, we explored a potential alternative consumer response following a dining experience – a complaint to the local health department. A complaint filed with the local health department represents an active assertion by the consumer that the restaurant has unsatisfactorily adopted the code of food safety, the default code as we have suggested. An alternative formulation of Hypothesis 1 would thus be that a consumer is less likely to file a complaint about a restaurant to the extent that the restaurant is regarded as authentic. Although we do not have data about all consumer complaints to the LA CDPH per se, the reason for each inspection is available (i.e., whether it is a complaint-based inspection as opposed to a routine inspection) and the LA CDPH claims to follow-up on all serious complaints about poor hygiene. We therefore examined whether the likelihood of a complaint-based inspection was less to the extent that the restaurant was regarded as authentic. Whereas unit of analysis in the primary analyses was at the level of each Yelp review, the unit of analysis here was at the level of each inspection. Of the 52,740 food safety inspections, 2,708 (4.9%) were due to a consumer complaint. Logistic regression was again employed; the regression models included the same set of organizational-level controls as the primary analysis models and also controlled for the previous health grade of the restaurant. To no surprise, a restaurant was less likely to undergo a complaint-based inspection to the extent that its previous food safety grade was higher (grade A $\beta = -0.843, p < .01$; grade B $\beta = -0.374, p < .01$). More interestingly, a restaurant was less likely to undergo a complaint-based inspection to the extent that it was regarded as authentic ($\beta = -0.276, p < .01$) even after controlling for the previous health grade. In other words, consumers are less likely to report concerns about violations of the default code of food safety to the extent

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6 Tables are not presented here but are available from the authors upon request.
that the code of authenticity has been clearly adopted. These findings shed additional light on the core hypothesis of this study and led further support to our claim that consumers are more willing to override the default code of food safety once the authenticity code is activated.

**DISCUSSION**

Institutional theorists emphasize how, in modern social life, individuals are drawn to rationality in that they often invoke rationalistic explanations and tend to adopt apparently rational solutions in a taken-for-granted manner (Meyer and Rowan, 1977). Common among these are explanations and solutions based on scientific theories and evidence, which are assumed to be authoritative (Drori and Meyer, 2006). Accordingly, science can be viewed as a social code. Institutional theories posit it as a default code, meaning that individuals typically assume that it applies unless they encounter evidence to the contrary. This is especially true when it is also of imperative standing in the form of legal obligations. Yet, little is known about the conditions under which default codes are suspended and another code is used instead. Institutional theory seems to give the impression that the spread of rationality involves little friction but examples from everyday life suggest otherwise.

The aim of this study was to explore a specific case of this research problem in the restaurant domain. Food and dining provides a ripe context for exploring the issue because modern dining consumers generally embrace science-based food safety laws as a default and recent laws requiring the posting of inspection grades make violations especially salient (Jin and Leslie, 2003). At the same time, many diners also hold the authenticity of a restaurant in high regard and this provides an alternative code for evaluating dining establishments (Carroll and Wheaton, 2009). We therefore started with the base assumption that compliance with either of the two social codes has an additive effect on consumer perceptions of value and we proceeded
to explore conditions under which consumers may overlook cues pertaining to one code and focus their attention more exclusively on cues pertaining to the other.

Our position was that the impact of violations of the hygiene code would be tempered when authenticity was at play. We hypothesized that authenticity moderates the impact of compliance with food safety regulations on consumer perceived value such that the impact is attenuated at high levels of authenticity and strengthened at low levels. We found support for this proposition in our empirical analysis of on-line restaurant reviews: compliance with food safety regulations on the one hand and authenticity on the other hand interact to inform consumer perceived value such that unhygienic yet highly authentic restaurants are valued just as much or more as their hygienic counterparts; however, unhygienic and inauthentic restaurants are valued significantly lower than their hygienic counterparts. Moreover, this interaction was stronger among food and dining enthusiasts as well as for single-category or specialized restaurants.

These findings offer insights into understanding how consumers make value judgments in light of conflicting social codes. The codes of hygiene and authenticity can indeed be regarded as oppositional and the empirical findings suggest that restaurant consumers resolve the apparent conflict by attending to the code for authenticity and overriding the default code for food safety. That is, this study provides evidence that consumers resolve contradictory social codes by selectively applying one code and overriding the other. We argued that the code of compliance with food safety regulations is the default social code in the restaurant context. However, consumers are willing to override this code if the organization is authentic.

That consumers are willing to selectively apply social codes when making value judgments about organizations has significant implications for understanding how organizations generate value. More specifically, organizational owners do not necessarily need to adopt all of
the social codes at play in order to create appeal. In generating these insights, this study also provides a nice microanalytical contrast to macro studies of conflicting institutional logics (cf., D’Aunno et al., 1991; Thornton, 2002; Greenwood et al., 2010) in that it involves the analysis of individual decisions about restaurants. It also differs from recent sociological theories of valuation that emphasize the structural aspects of the context, such as the degree to which producers or evaluators are concentrated (Lamont, 2012; Zuckerman, 2012).

This study also identified social conditions that shape the way in which contradictory codes are resolved and, as such, offers insights into related theoretical perspectives. For example, this study extends work on understanding how domain enthusiasts evaluate organizations by showing that they are more willing than others to ignore the social codes that are rooted in legal imperatives and instead apply ones of social construction. In addition, it illuminates understanding of how membership in categories shapes judgments by audience members. Hsu and colleagues (2009, 2006) argued that consumers find generalists more difficult to interpret; this study builds on their ideas by finding that consumers respond to this difficulty in interpretation by relying more heavily upon the adoption of the legal code when evaluating organizations that span multiple categories.

At a broader level, the study illustrates another specific way in which organizational practices are endogenous to their legal environments. Edelman and company (1999) highlight this endogeneity by pointing to the ways in which various professional groups frame problems and solutions that subsequently become adopted by organizations and then enforced by the courts (see also Edelman, 2004; Dobbin and Kelly, 2007). In food and dining, we see here that the law may be deemphasized or ignored because the organization at hand presents another identity – an identity as an authentic producer of a particular cuisine – that some consumers
accept in its place. Some consumers similarly support purveyors of raw milk and raw milk products such as cheese and yogurt when these restaurant owners have faced raids and threats of closure by governmental health officials (Food and Drug Administration, 2012a, 2012b; Greene, 2012).

In extreme cases, consumer reactions can be so strong as to engender real changes in the law. For instance, as a result of the pushback from the crackdown of the Chinese hanging ducks in California in 1981 described above, Jerry Brown, the Governor of the State of California signed into law a newly adopted legislation that exempted “Chinese-style roast” (including but limited to Chinese-style barbecue duck, dry-hung duck and Peking duck) from Section 113996 of the Health and Safety Food Code. This exemption stands to this day, and ducks hang in Chinese restaurants and shops all over California. For like reasons, the public in the State of California has broadly endorsed the enactment of similar explicit exemptions for Korean rice cakes and freshly made Asian rice-based noodles (Thompson, 2010). Similarly, New York City now allows fermented kimchi to sit at room temperature in Korean restaurants (Collins, 2012).

Even though formal legal changes such as these may be rare (Renteln, 2004), the rejection of default rational codes by certain individuals in certain contexts is not. Looking beyond food and dining, we would suggest that the continued modern popularity of practices as different as feng shui, home schooling and the anxious shunning of vaccinations may arise from a similar process of rejection of the default code of rationality in favor of an alternative. We look forward to future research that analyzes the decisions and attributions made in these and other social contexts where social codes potentially collide.

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7 New York City also now exempts hanging ducks in Chinese restaurants (Collins, 2012).
REFERENCES

Berquist, L. M.

Beverland, M. B.

Bitektine, A.

Brown, E. R.

Brown, P.

Carroll, G. R. and D. R. Wheaton
2009 The organizational construction of authenticity: An examination of contemporary food and dining in the U.S. In B. M. Staw and A. Brief (Eds.), Research in Organizational Behavior, 29: 255-282. New York: Elsevier/JAI.

Clogg, C. C., E. Petkova and A. Haritou

Collins, G.

D'Andrade, R.

D’Aunno, T., R. I. Sutton and R. H. Price

Davies, S.

Dobbin, F. and E. L. Kelly
Dobbin, F., J. R. Sutton, J. W. Meyer and W. R. Scott
1993 Equal opportunity law and the construction of internal labor markets. American Journal of

Drori, G. S. and J. W. Meyer

Dutton, D.

Edelman, L. B.

Edelman, L. B. and M. C. Suchman

Edelman, L. B., C. Uggen and H. S. Erlanger

Food and Drug Administration

Food and Drug Administration

Grazian, D.

Greene, J.

Greenwood, R., A. M. Diaz, S. X. Li and J. C. Lorente

Guy, K. M.
Hannan, M. T., L. Pólos and G. R. Carroll  

Hedström, P.  

Hoetker, G.  

Hsu, G.  

Hsu, G., M.T. Hannan and Ö. Koçak  

Hsu, G., G. Negro and Ö. Koçak (Eds.)  

Jin, G. Z. and P. Leslie  

Jin, G. Z. and P. Leslie  

Jones, C., N. Anand and J. L. Alvarez  

Kovács, B., G. R. Carroll and D. W. Lehman  

Kovács, B. and M. T. Hannan  
Lamont, M.  

Lindholm, C.  

1989 Creating new memories that are quickly accessed and confidently held. Memory and Cognition, 17: 607-16.

Los Angeles Times  

Luca, M.  

March, J. G., and H. Simon  

Meyer, J. W. and B. Rowan  

Meyer, J. W. and W. R. Scott  

Ocasio, W.  

Ocasio, W.  

Peterson, R. A.  

Peterson, R. A.  

Petty, R. E. and D. T. Wegener  

Potter, A.  
Powell, W. W. and J. A. Colyvas (Eds.)

Powell, W. W. and P. J. DiMaggio (Eds.)

Renteln, A.D.

Rosch, E.

Salganik, M. J., and K. E. C. Levy

Seiler, M.


Starr, P. E.

State of California
2012 California Retail Food Code (Excerpt from California Health and Safety Code), Sacramento CA.

Suchman, M. C.

Sutton, J. R., F. Dobbin, J. W. Meyer and W. R. Scott

Sweeney, J. C. and G. N. Soutar
Thompson, D.
2010 Senate Oks keeping rice noodles out of cold. San Francisco Chronicle, May 25.

Thornton, P. H.

Weber, R. P.

Yi, D.
2000 Health codes often at odds with ethnic tastes. Los Angeles Times, September 6, pp. A3, 17.

Zeithaml, V. A.

Zuckerman, E. W.

Zuckerman, E. W.
TABLES AND FIGURES

Table 1: Distribution of Yelp ratings

<table>
<thead>
<tr>
<th>Rating (stars)</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>47,645</td>
<td>6.6%</td>
</tr>
<tr>
<td>2</td>
<td>68,899</td>
<td>9.5%</td>
</tr>
<tr>
<td>3</td>
<td>137,296</td>
<td>19.0%</td>
</tr>
<tr>
<td>4</td>
<td>274,245</td>
<td>37.9%</td>
</tr>
<tr>
<td>5</td>
<td>196,180</td>
<td>27.1%</td>
</tr>
<tr>
<td>Total</td>
<td>724,265</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 2: Distribution of food safety grades (by Yelp review)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>646,027</td>
<td>89.2%</td>
</tr>
<tr>
<td>B</td>
<td>73,629</td>
<td>10.2%</td>
</tr>
<tr>
<td>C</td>
<td>4,609</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Note: The data comprises information about 52,740 food safety inspections. Given that inspections occur once every four to five months, multiple Yelp reviews occur between each inspection. Consequently, multiple reviews are linked to each food safety grade.
Table 3. Descriptive statistics and correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stars in review</td>
<td>3.694</td>
<td>1.157</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Grade A</td>
<td>0.892</td>
<td>0.310</td>
<td>0.016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Grade B</td>
<td>0.102</td>
<td>0.302</td>
<td>-0.014</td>
<td>-0.967</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Grade C</td>
<td>0.006</td>
<td>0.080</td>
<td>-0.012</td>
<td>-0.230</td>
<td>-0.027</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>5. Authenticity score</td>
<td>0.162</td>
<td>0.121</td>
<td>0.088</td>
<td>0.025</td>
<td>0.023</td>
<td>0.011</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6. Total no. words in review</td>
<td>134.275</td>
<td>117.183</td>
<td>-0.094</td>
<td>-0.010</td>
<td>0.010</td>
<td>0.002</td>
<td>0.033</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Price level</td>
<td>1.826</td>
<td>0.694</td>
<td>0.012</td>
<td>0.093</td>
<td>-0.087</td>
<td>-0.031</td>
<td>0.041</td>
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<td>1.227</td>
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<td>0.016</td>
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*** p<0.01, ** p<0.05, * p<0.1
N=724,265 Yelp reviews
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<th>Grade B dummy</th>
<th>Authenticity score</th>
<th>Grade A dummy × Authenticity</th>
<th>Grade B dummy × Authenticity</th>
<th>Price level</th>
<th>Ln (no. prior reviews)</th>
<th>Restaurant size</th>
<th>Restaurant age</th>
<th>Chain-affiliation</th>
<th>Total no. words in review</th>
<th>Zip code dummies included</th>
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<td>0.238***</td>
<td>0.143***</td>
<td>1.137***</td>
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<td>-0.489**</td>
<td>0.100***</td>
<td>0.172***</td>
<td>-0.147***</td>
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<td>(0.227)</td>
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<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.007)</td>
<td>(0.000)</td>
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<td></td>
<td>0.253***</td>
<td>0.155***</td>
<td>1.143***</td>
<td>-0.459**</td>
<td>-0.489**</td>
<td>0.114***</td>
<td>0.182***</td>
<td>-0.135***</td>
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<td>-0.010**</td>
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<td>-0.489**</td>
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<td>0.182***</td>
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*** p<0.01, ** p<0.05, * p<0.1
Table 5. Ordered logistic regression estimates for Yelp rating

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<th>Niche width</th>
<th>Domain enthusiasm</th>
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<td>Multiple-category</td>
<td>Below mean</td>
<td>Above mean</td>
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<td></td>
<td>Model 7</td>
<td>Model 8</td>
<td>Model 7</td>
<td>Model 8</td>
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<tr>
<td><strong>Grade A dummy</strong></td>
<td>0.376***</td>
<td>0.301***</td>
<td>0.288***</td>
<td>0.391***</td>
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<td>(0.059)</td>
<td>(0.069)</td>
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<td><strong>Grade B dummy</strong></td>
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<td>0.249***</td>
<td>0.177**</td>
<td>0.311***</td>
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<td>(0.071)</td>
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<td>Authenticity score</td>
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<tr>
<td><strong>Grade A dummy × Authenticity</strong></td>
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<td>(0.300)</td>
<td>(0.327)</td>
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<td><strong>Grade B dummy × Authenticity</strong></td>
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*** p<0.01, ** p<0.05, * p<0.1
Note: These predicted ratings are based on the parameters estimated from Model 4 in Table 4. The plot shows changes in perceptions of consumer perceived value (y-axis) as a function of authenticity (x-axis); all other variables are held constant at their means.