

Category Reinterpretation and Defection: Modernism and Tradition in Italian Winemaking

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When two groups of market actors differ in how to interpret a common label, each can make claims over the label. One categorical interpretation and the group that supports it risk disappearance if the rival interpretation gains ground. We argue that when members of the endangered category become partial defectors that span categories, their history presents challenges to the identity of nondefectors that will inhibit further change. Our empirical analysis of “traditionalism” and “modernism” in the making of Barolo and Barbaresco wines supports this argument.

Key words: organization and management theory; economic sociology; organizational ecology

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Introduction

This study examines the implications of widespread challenges to conventional classifications arising from producers' participation in multiple categories. These challenges are more than static anomalies for the understanding of markets, which typically thrive on conformity to institutionalized arrangements and practices. Memberships in categories also reflect collective identities considered worth preserving, so producers who reject the limits imposed by categorical conventions stand as refutations that can affect change in the system of categories.

Current research finds that multiple-category membership entails various kinds of disadvantages (Zuckerman 1999, Hsu 2006, Hsu et al. 2009, Negro et al. 2010). This work assumes that audiences preserve agreement about schemas—the sociocognitive representations used to interpret reality. However, category straddling can weaken the strength of categorical beliefs (Hannan et al. 2007). Straddling undermines consensus because it introduces disagreement about which features are considered typical of the category, and disagreement can initiate disputes involving different groups of market actors, particularly producers.

We examine such disputes and consider two factors—the object and the subject of the claims made by these different groups—that we expect will influence how they are resolved. We argue that situations of category formation in which the emergence of a new consensual schema is associated with a new label (the category's descriptive tag) differ from situations in which new schemas are applied to an existing category label. We also claim that

the implications of these disputes differ by the group that initiates them—in particular, whether the reinterpretation claim is initiated by insiders (producers who defected from a category) or by outsiders.

We compare the cases of claims made over new and existing labels and of claims made by insiders and outsiders, and we argue that schema disagreement is most problematic when insider defectors make opposing interpretations of an existing label. Associating an existing label with a new schema is what we refer to as *category reinterpretation*.

We introduce two broad arguments. First, category reinterpretations can be perceived as a threat by the producers who support the ex ante consensus about the meaning of the category label—the “loyalists.” Second, insider defectors assume particular relevance in markets because they have a history; they were once typical members of the original category. Hence their defection makes them disloyal to their former identity and also validates the competing interpretation as a legitimate claim to the label. Insider defections are thus more threatening than the entries of producers without prior experience that associate with the reinterpretation.

Spanning interpretations, taking actions that align with each interpretation, has special significance. Spanning can arise from the actions of defectors, what we term “partial defectors,” or new entrants (de novo category spanners). De novo spanners are more marginal than defectors and, as such, are expected to be less typical members of a category (Hsu et al. 2011). We think that spanning by defectors matters more. Partial defectors' former category membership and bearing of a common

label pose a fundamental categorization problem, and loyalists risk losing their categorical specificity or even being assimilated into the rival category. This circumstance often sparks efforts by loyalists to defend the original, traditional view and to insist on the distinction between schemas.

Finally, the defense by loyalists notwithstanding, category straddling can eventually cause audiences to update their views on the meaning of the category. If insider defectors persist in category spanning, audiences will gradually redefine their assumptions about what features are typical of the bearers of the label and come to accept fuzziness of category boundaries as natural. By this kind of process, increased category spanning can reduce the appeal of the offerings associated with the label. If the label loses its power to shape expectations, loyalists are less likely to mobilize to defend their position.

We study the trajectory of changes in the interpretation of a pair of classic Italian wines, Barolo and Barbaresco. The opposed meanings applied to these labels were anchored in the practices of vinification. These wines, made in the Langhe, at the southeastern corner of Italy's Piedmont—close to the French and Swiss borders—are generally regarded as among the world's greatest wines. A reinterpretation of Barolo/Barbaresco emerged to challenge the prevailing tradition after some vintners chose to use wine-aging practices that did not respect the region's established practices of winemaking. This challenge evolved into an opposition between categorical meanings. The "modernist" reinterpretation gained favor among a new generation of Barolo/Barbaresco producers and received the praise of wine critics. In response, "traditionalist" producers constructed a collective identity in defense of the original interpretation.

To lay out this account, we rely on material from interviews with 45 winemakers in their cellars, with wine journalists and enologists in the Piedmont area and elsewhere in Italy during 2005–2007. We also conduct a statistical analysis of the response to the categorical dispute. We empirically examine the rate of defection from the use of the old-style aging practices that critically defined the distinction between tradition and modernism of Barolo/Barbaresco winemaking. In general, this study brings attention to the active role played by insiders in regulating collective category dynamics and shows that expressions of identity can be seen as solutions to maintaining categorical distinctions.

Category Interpretations, Fuzziness, and Defections

Categories are semantic objects; for purposes of sociological analysis, they can be considered to be social agreements about the meanings of labels applied to them. Meanings can be represented as schemas that tell

which feature values are consistent with membership in the category and which are not. Familiar examples of such schemas are the codes specifying genres in graphical art (Becker 1982, Fine 2004), literature (Griswold 1987), films (Zuckerman and Kim 2003, Hsu 2006), music (Peterson 1997, Grazian 2003), cuisine (Rao et al. 2003, Carroll and Wheaton 2010), and beer (Carroll and Swaminathan 2000). In each case, the prevailing schemas tell what features are relevant for judging membership in a category.

Producers and their offerings often fit only partially to widely accepted schemas. For instance, Hsu (2006) reports that critics assign feature films to slightly more than three genres. Because the genres impose different constraints, a film that gets assigned to multiple genres cannot fit perfectly in any one of them. (Hannan 2010 reviews a rapidly growing body of research that documents the generality of such partial assignments of membership.)

Hannan et al. (2007) argue that the issue of partiality of membership ought to be at the center of analysis of the emergence and persistence of categories. These authors follow a branch of cognitive science in defining categories as *fuzzy* semantic objects whose boundaries are not necessarily sharply delineated. In this view, a producer's membership in a category (for an audience) reflects the degree to which its feature values fit audience members' schemas for the category.

Fuzzy-set theory allows partial memberships in sets. A fuzzy set is defined by a grade-of-membership (GoM) function, which maps objects in some universe of discourse to the $[0, 1]$ interval. An object's GoM in a category (or degree of typicality as a member of a category) from the perspective of an audience member tells the degree to which its perceived feature values fit her schema of the category.

A social category emerges when the members of an audience come to substantial agreement about what a label means, and a category persists so long as the audience retains a high level of such intensional consensus. Actions by category members and assessments by the audience affect the emergence and persistence of consensus, a central component of market processes based on categorization and valuation (White 1981, Zuckerman 1999, Cattani et al. 2008). Consensus more likely emerges when the objects being labeled and classified are highly similar. Likewise, increasing diversity (and violations of category schemas) after categorization threatens the durability of a consensus.

The clarity of a category's boundary can be understood in terms of fuzziness. A category has sharp boundaries if audience members seldom assign low or moderate GoM to bearers of the category label; boundaries are weaker if such partial assignments of membership are common. The concept of category *contrast* (and

its mirror concept *fuzziness*) captures this idea. The contrast of a category is the average GoM for those with some positive degree of membership. In other words, in a high-contrast category, producers are generally perceived to be either nearly full-fledged members or virtually not members at all. And the higher the contrast of a category, the lower is its fuzziness.

When fuzziness increases, the producers to which audience members apply a label tend to differ on values of schema-relevant features. Such dissimilarity sparks disagreement about the meaning of the label and about what producers deserve the label. In making this argument, we build on the notion that consensus about the meaning of a category decreases as its fuzziness—as perceived by the audience—increases (Hannan et al. 2007). Fuzziness increases when producers straddle category boundaries, that is, when they adopt practices and produce offerings that (partially) fit more than one category (Hsu et al. 2009). Below, we argue that the presence of producers with positive GoM in a pair of categories makes the boundary problematic and arguably increases its salience, especially to the full members, if categorical identities get constructed as oppositions.

We think it is important to distinguish cases in which the emergence of a new consensual schema is associated with a new label (category emergence) from those in which it is applied to an existing category label (category reinterpretation). We claimed that it also matters whether the new collective schema comes from insiders (defector initiated) or outsiders (de novo initiated). Consideration of these distinctions suggests four main trajectories, depicted in Figure 1.

Consider first the situation with different labels for multiple categories, where increased fuzziness is driven by de novo spanning (quadrant D). In art worlds, category structures often evolve in a dialectical form, but art movements typically involve new cohorts of artists who propose new styles and use different labels to refer to them. In a study of American avant garde art, Crane (1987) argues that leading members of a style exhibit most or all characteristics of a style, whereas marginal members exhibit only one or two—so category spanning is limited and carried on by new artists. The categorical tension that might erupt when multiple categories engage the audience tends to be resolved via artists’ replacement and use of new labels. For

example, Crane notes that when “minimalism” replaced “abstract expressionism,” artists who continued to identify as abstract expressionists became isolated and did not even see each other’s work.

Quadrant B in Figure 1 represents situations where insiders are the source of the categorical disagreement but different labels are applied to the new and old schemas. In the context of French gastronomy, chefs defected from “classical” cuisine to “Nouvelle” cuisine, a category that was distinctly labelled and codified, and the label extolled experimentation and combination (Rao et al. 2003, 2005). The two categories did not compete for a single, true interpretation of French cuisine. The flow of defections from classical cuisine sustained the growth of Nouvelle cuisine and seemed to slow down only when rampant category spanning incurred disfavor from the confused critics.

A collective reinterpretation of an existing category can yield a pair of opposed categories (Quadrant C). Consider the American beer industry. The microbrewery movement supported artisanal production and developed into antagonism to industrial, mass-produced beer. Carroll and Swaminathan (2000, p. 725) quote one microbrewer as saying, “Today’s craft brewing movement is a reaction against the mongrelization of beer,” whereas another adds, “I would hesitate—dare I say—to call some of that mass produced stuff ‘beer.’” A related example of a category reinterpretation is the British precursor to the American microbrewery movement, the “Campaign for Real Ale,” whose original name was the “Campaign for the Revitalisation of Ale.” In each case, the rival categories claim the original label, “beer” and “ale,” respectively.¹

Carroll and Swaminathan (2000) pay particular attention to so-called contract brewers. These are firms that make claims of being authentic craft brewers but do not own brewing facilities or make their own beer. Industrial brewers also make beers that claim to be craft brews or take equity positions in craft brewers, engaging in partial defection and resulting in fuzzier boundaries. The contention about what constitutes authentic craft beer was intense. The insiders—microbrewers and the enthusiast audience—accused contract firms of being fakes and “virtual” brewers (Carroll and Swaminathan 2000, pp. 727–728). They considered themselves true to the original style.

The growth of contract brewers was challenging for microbreweries to address. However, contract brewers were mostly outside businesses hiring breweries to make their product and could be discredited for passing (Goffman 1963) as microbrewers. Rao et al. (2000, p. 264) note that “craft-brewing enthusiasts policed pretenders to their identity by quickly ridiculing them as impostors. Arguably, the policing of inauthentic incursions by enthusiasts sustained the identity of craft-brewing and spurred the growth of the movement.” And

Figure 1 Four Trajectories to Change of Categories in Markets

		Labels for reinterpretation	
		Common	Distinct
Originators of reinterpretation	Insiders (defection)	A	B
	New producers (de novo)	C	D

we think the effective policing of the category boundary calmed down the activation of microbrewers.

Quadrant A directs attention to a situation with rival interpretations of a common label and fuzziness stemming from insiders' partial defections. This is the situation we theorize below, drawing on the context of Italian winemaking that we studied. In the empirical case we study, dissatisfied producers reinterpreted the conventional practices for making of "Barolo" and "Barbaresco" but claimed these labels for their wines. Written legal codes, called *disciplinare di produzione*, mandate the properties required to apply the label Barolo or Barbaresco to a wine (Caldano and Rossi 2004). The codes also specify the maximum allowable yield, minimum alcohol content, and a variety of chemical properties. Crucially for our analysis, they allowed discretion in choice of aging technology: vintners can decide whether the barrels are made of oak or chestnut, and they have free choice on the sizes of the barrels. For more than a century, Barolo/Barbaresco makers relied on very long maceration, uncontrolled fermentation, and aging in Slovenian oak casks (*botti grandi*) that can be as large as 120 hectoliters. These practices produced austere wines, which are very tannic when young and realize their full potential only after considerable aging. Quality was uneven.

The choice of what kind of wood containers to use for aging became a fault line. A group of rebels began to challenge the prevalent technology of winemaking by using *barriques*, small (usually 225-liter) barrels made of aromatic French oak, and changing other vinification practices. Aldo Vacca, managing director of the Cooperativa Produttori del Barbaresco, summarized matters succinctly:²

In the late 1970s and early 1980s, this area was exposed to new huge markets, first the U.S.A. and then Japan. Our wines have strong tannins, strong acidity, not too much fruit, and are not so balanced. This type of style was good for collectors. . . . To enter those [new] markets the wine should be a little less tannic, a little "easier." Lots of producers started to produce easier-to-drink and ready-to-drink wine (a maximum of six years to be ready) and not super tannic.

Gianni Fabrizio, an editor of the *Gambero Rosso* wine guide, explained,

Barriques fix the antocyanins, so the color is deeper. Second, they induce higher exchange of oxygen, resulting in softer tannins. According to the modernists, the biggest problems of Barolo were the lack of color and the presence of too much tannin. These characteristics were perceived similarly by journalists, who thought that the public wouldn't love this (old) kind of wine.

The use of the small French barrels became a symbol of modernity in making Barolo and Barbaresco. Rebellious winemakers strongly criticized the old-style

Barolo/Barbaresco wines as defective or stylistically stale. But they continued to claim the original label for their wines. Elio Altare, a leader in a collective break with tradition, recounted the story as follows:

I was really ambitious, and I still am. If you are ambitious, you seek to compete only with the best. I asked to myself, "Who can forbid a young producer to compete, to make investments?" Who can tell you, "You don't change because I am Barolo! There are rules!" For me a good wine must be good always, not just after 20 years. If the wine is good, I want to enjoy it now.

Altare undertook a notorious radical act that symbolized the cultural break and put the focus squarely on the choice of barrel. After spending time with winemakers in Burgundy, he tried without success to convince his father to use *barriques* in the family cellar. In 1982, his frustration with the constraints of tradition led him to destroy the family's *botti* with a chainsaw. His daughter Silvia told us, "When Elio started to make all these changes, my granddad didn't talk to his son for almost 10 years. He was so disappointed he even stopped going to church because the people in the village thought that my father was crazy." Indeed, his father disinherited him.

Far from being outcast, he instead became the leader of a faction. Daniel Thomases, an evaluator for both the *I Vini di Veronelli* and Robert Parker's *Wine Advocate*, characterized Altare's significance:

The revolution introduced by Altare consisted principally of an extremely short fermentation of the wine—three or four days—and the use of small oak barrels instead of larger casks. Altare had a very important influence because he was from La Morra, a town with many young producers who were just beginning to market their wine. He basically created a school in his own area.

The evidence we have collected suggests the *barrique/botti* distinction serves as what Hannan et al. (2007) call a *minimal test code* for assessing membership in these categories. Knowing only that a producer uses the French barrels leads outside audience members to treat as default that they also use most, if not all, of the harder-to-observe "modernist" practices of vinification. Incorporating an attribute that signals a style increases the degree of membership in the category associated with that style (Crane 1987).

The members of the audience clearly interpreted the use of *barriques* as a practice that determines category membership over the period that we study. The choice of barrel/cask is durable, because the wine ages for three to five years in the cellar; thus this choice is easily observable to anyone who visits. Other aspects of vinification can be observed only during brief periods in the wine-making process.

Using *barriques* for aging Barolos and Barbaescos was adopted as an emblem by producers seeking to enhance quality. Informal groups of experimenters began

to meet, taste each others' wines, and exchange ideas. According to Claudio Conterno of the Conterno-Fantino winery, "This big group of 20 to 30 producers changed the history of this region in the sense that they made people talk again about Barolo and, most important, they made people open bottles of Barolo again."

These informal networks aided the construction of a new common schema for what the journalists and critics (but not the protagonists) began to call *modern* Barolos and Barbarescos. Altare (along with other producers like Clerico, Sandrone, and Scavino) sought to frame the *barrique* as an essential tool for reliability in crafting high-quality wines that appealed to customers. Many insurgents claimed that old-style Barolo/Barbaresco was bad wine—too tannic, unbalanced, oxidized, and containing off-putting aromas. They did not simply argue that winemaking practices should be reformed by adopting technical innovations. They challenged the validity of those practices and implicitly the basic values underlying the cultural model in which the practices were immersed.

The new-style wines found favor with the critics and the market. One wine journalist explained that, when 50 or more wines are tasted in a day, those with soft tannins and a fruit-forward taste stand out more than austere wines. Critical praise translates into success with audiences in the wine industry. An analysis of retail price data for Barolo and Barbaresco reveals that (i) wines with higher ratings receive substantially higher prices: a super three-star wine sells for \$32 more on average than a one-star wine; and (ii) over and above this, wines made in the traditional style command lower prices net of the critical ratings—roughly \$9 less on average (Negro et al. 2007). Thus a difference in critical reception translates to a substantial difference in marketplace reception.

The use of a single label (either Barolo or Barbaresco, depending on the location) for two styles (traditional or modern) poses a problem of interpretation. If segments of the audience associate different schemas with a label, then communication about the producers, their practices, and their products becomes awkward. Participation in the activities associated with the label loses appeal for the members of the audience under such conditions. This situation of low consensus on the meaning of a category label puts the category at risk of dissolution and provides fertile ground for contention.

In response, the producers who began to see themselves as "traditionalists" insisted on a sharp categorical distinction. In 1997, Bartolo Mascarello wrote an open letter to the *Consorzio* (the industry association responsible for monitoring the use of the *disciplinare* code) criticizing "French-Californian models" and issued the clarion call, "There is one and only one Barolo; defend it!" He started using the label on his wines "*Il ne faut pas faire des barrique mais des barricades*" (Make barricades, not *barriques*).

"Traditionalists" argued publicly that the "modernist" wines were no different than "international" wines, did not reflect the terroir and traditions of Barolo and Barbaresco, and were therefore inauthentic. Giacomo Conterno (of the Poderi Aldo Conterno winery) argues that Barolo producers should seek to "intensify the personality of Nebbiolo and its site identity, to make the opposite of a Coca-Cola wine." For him, this means rejecting *barriques*.

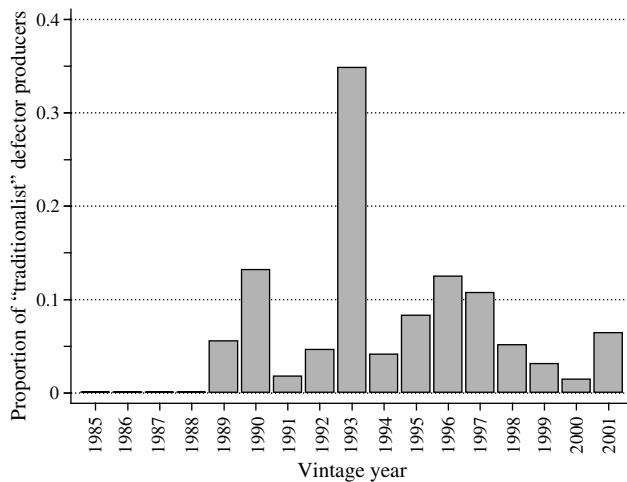
Others offered a more fundamental critique. They argued that defecting from the old ways represents a capitulation to the market and constitutes a kind of moral transgression. This critique drew an association between rampant market orientation and a lack of integrity. Maria Teresa Mascarello, who took over Cantine Mascarello Bartolo after her father Bartolo's death, put it this way: "My father always said that he wasn't embarrassed of our land... He said we had to let the wine taste like where it came from. You can't violate your environment; you can't make it something it's not" (Esposito 2008, p. 177). Likewise, Giuseppe Rinaldi, a highly regarded traditionalist, proclaimed,

When you have a wine that is really tannic like Barolo—and this feature is very typical, you have to accept Barolo as it is. You don't have to make a wine for everybody. If you don't like it, don't drink it. The main problem is the interference with the nature of the wine just to make it more attractive for the market. It is a damned bad thing, because a land like this, with a history, a tradition, and an old identity, erased everything it had in order to become more attractive on the market.

Fuzziness and the Rate of Category Defection

The success of the new-style wines induced some old-style producers to straddle by making wines in *both* styles (and often by combining practices from both styles). Defection from tradition has risen. Figure 2 depicts variation over time in the proportion of "traditionalists" who have started using *barriques* in the focal year. Note that the (yearly) probability of defection rose in the 1990s and peaked at over 0.30 in 1993 before declining to roughly 0.04 in the last four years of observation. The wines made during the period of greatest rate of defection from the traditionalist camp were reviewed by the guide and released on the market during the years 1996 and 1997.

Straddling categories signals a lack of commitment to any category and highlights issues of identity associated with category membership. The behavior of straddlers confuses the audience, because many bearers of a category label engage both interpretations of its meaning. Experts argued that answering the question "traditional or modern?" is not simple anymore and that the middle ground of producers who combine *botti* and *barriques* has exploded, which makes classification challenging (Esposito 2008).

Figure 2 Proportion of “Traditionalists” Defecting to “Modernism” By Vintage

It is not surprising that new producers also began using *barriques* in their first vintages, and this trend increased over time. For instance, for vintages covered by *I Vini di Veronelli* before 1990, only 25% of the Barolo/Barbaresco producers reviewed for the first time used at least some *barriques* for their wines. During 1990–2001, however, 40% of the wineries entering the guide used them. If producers from the initial category switched to the emerging one by adding feature values that fit the rival interpretation and dropping those that fit the original interpretation, then the boundary between the categories would remain sharp.

“Traditionalists” challenged modernism in general but saw distinctions between *de novo* straddlers and partial defectors. Giuseppe Rinaldi argued that

[n]ew producers were not proud to be winemakers, they were not proud to be part of the tradition, as if they were ashamed; until few years ago being a farmer was very difficult...many new producers started to follow [early innovator, Angelo] Gaja...this was positive, because young people, instead of leaving the country, started to cultivate the land.

Straddling by new entrants added to the confusion. Nonetheless, partial defections are more challenging as a form of straddling. What makes partial defectors problematic is the sequence of mobility. Partial defectors used to be fully affiliated with the original category, but now they display some features inconsistent with that category and others that are consistent with it. Hsu et al. (2011) argue that earlier affiliations typecast social actors into a category and reduce their chances of future affiliations to other categories (if the categories are highly taken for granted). In this sense, partial defectors displayed some features typical of the original category schema, and audience members are likely to regard them as members of that interpretation of the category.

Partial defection exposes a contradiction, because the defectors can be associated with both interpretations. The loyalists, the remaining members of the original category, who are still perceived as similar to the defectors, see a risk of losing control of their collective identity. To them, this condition is thornier than being defeated by rivals; it is more like losing a connection to their own history.

Maria Teresa Mascarello made the connection explicit:

However, there is another type of traditionalist, who simply are opportunists. They canceled the experiences accumulated in this world just to take other stories and other techniques as models... This is a matter of knowledge of one’s own history, and a matter of dignity... Wine-making for me is not improvisation. For me, it is the work that my father had transferred to me. So it is part of my identity. I don’t want to erase my roots, my history, because it identifies me.

Resharpener boundaries through commitment to “tradition” becomes a way for the remaining category members to clarify the situation and to prevent the initial schema from being submerged. And if the two interpretations are to coexist, something must prevent the wholesale defection of the loyalists (as seems to have happened in French cuisine). Therefore we focus on the defection rate among full-fledged “traditionalists.”

Our argument focuses on variations in the strength of the “traditional” collective identity. A reinterpretation of a category label (especially if well received in some relevant audience) threatens this identity. The loyalists react to this threat by more clearly articulating the collective identity as oppositional. As is the case generally with oppositions, this strengthened interpretation of the original categorical identity seeks to rule out the possibility of spanning. In the case of successful oppositions, a producer must sit in one camp or the other. Gaining agreement within the “traditional” camp on this matter strengthens its collective identity. If the strength of the identity regarded as oppositional gains widespread support, then this changes the meaning of partial defection, making it a full defection from one’s former identity. This change in meaning makes partial defection an act of enduring disloyalty. Therefore, a strong oppositional identity ought to slow the flow of defections and stabilize the coexistence of the two interpretations.

According to this argument, variations in the intensity of the threat are crucial. Stronger threats are more likely to heighten the salience of the identity and an effort to redefine it as oppositional. We argued that spanning creates such a threat but that spanning by new producers (with no prior categorical association) is much less threatening than defection by insiders.

We also think that the presence of insider defectors who affiliate partly with the original interpretation is especially problematic. These are the cases that most

confuse matters and blur the boundary. Insider spanners who remain highly similar in most respects to the loyalists pose the greatest identity threat.

As we explain, we calculated grades of membership in the two styles in terms of the proportion of a producer's offerings in a vintage that fits each style. So we translate the argument above in terms of the GoM in the tradition of the insider defectors. Accordingly, we formulate the implications of this argument in terms of the following hypothesis.

HYPOTHESIS 1. *Higher average grade of membership of insider partial defectors in the original category will lower the rate of defection from that category.*

Adjusting expectations about membership requires effort and time. But if partial defectors continue to straddle categories, then the audience will make fewer assumptions (take less for granted) about whether producers' features conform to a category schema. In Barolo/Barbaresco winemaking, more and more producers displayed increasing diversity in methods of production and associated styles.

We asked intermediaries in wine markets about the more current relevance of the category distinction to consumers and about the tie of the barrel/cask distinction to the "modernist" interpretation of the category. Our interviews with wine merchants and sommeliers in Alba and Milan revealed that these agents perceived cultural fault lines in Barolo/Barbaresco that coincide with the "traditionalist/modernist" divide. However, a sommelier from a restaurant whose wine menu listed on separate pages the Piedmont wines aged in *botti* and those aged in *barriques* told us that his restaurant has "a wine chart where this kind of difference is highlighted. If there are intermediate situations, we put producers in one of the two categories according to our judgement."

If partial defectors manifest the inconsistency between interpretations, audience members will generally update their beliefs and revise default assumptions (Hsu et al. 2011). Shifting away from reliance on defaults about conformity increases fuzziness and lowers the contrasts and the standing of the two categories (pairings of the same label with different schemas). As straddling continued in the Langhe, the contrast of the "modernists" declined. Recently, several Barolo and Barbaresco producers admitted that there is a "range of possibilities" as to how wine can be made, somehow revising the stark distinction that ruled in the past. This shift ought to weaken the contention about categorical membership.

Unlike the reasoning behind the first hypothesis, which concentrated on the views of producers, a second argument brings the audience more squarely into the picture. If the two interpretations of the label confuse the audience and cause them to regard the whole set of producers as fuzzy, then there is less to defend. The identity stakes are lower once the audience has come to regard

the situation as inherently fuzzy. Critics then began to speak of a middle ground in winemaking and of a blurring of stylistic differences between the camps of the Barolo and Barbaresco producers. These developments ought to defuse the threat from modernism and weaken the link between spanning and the strength of activation of a "traditionalist" identity.

We think that enduring spanning will lead the enthusiast audience to come to regard the categorical divide as having ended. For us, this means that long durations of spanning by once full-fledged traditional winemakers will weaken the process claimed in the first hypothesis. Therefore, we hypothesize an interaction effect.

HYPOTHESIS 2. *Increasing average time elapsed since partial defection will attenuate the negative effect of partial defectors' grade of membership in the original category on the hazard of defection.*

Empirical Analysis of Defection from "Tradition"

This part of the analysis uses data on vintners' use of aging techniques culled from the leading wine guide *I Vini di Veronelli* (hereafter Veronelli guide) and from telephone interviews conducted in 2006 with all makers of Barolo/Barbaresco who were listed in the guide for at least one vintage. The crucial information comes from indications for each wine listed whether it was aged in *botti* only, *barriques* only, or a combination of *botti* and *barriques*.

Dependent Variable

Using event-history methods we analyze the hazard of defection from traditionalism of the 192 producers who had at least one Barolo or Barbaresco reviewed in the Veronelli guide in its first 15 editions and for whom data on the practices used for wine aging are available. We define a defection from "tradition" as a producer's shifting from a history of exclusive use of *botti* to *some use of barriques*. Given the timing of the modernist reinterpretation, we begin our analysis in 1980. We end the period of analysis with the 2001 vintage, because 2002 and 2003 were poor vintages, and many producers did not release Barolos and Barbarescos. The 2004 vintage had not yet been reviewed when we built our data file.

The number of producer-years at risk of (first) defection over 1980–2001 is 1,140; the number of observed defections is 62. Thus the simple hazard of defection (in yearly time units) is 0.054. The implied probability of remaining traditional over the roughly 20-year history since the rise of modernism would be approximately 0.32 if this hazard were constant over time.

We adopt the piecewise exponential specification of tenure dependence in the hazard to allow the base rate of defection to vary flexibly with organizational tenure. This approach splits duration into pieces. The base

failure rate is specified as constant within each time-piece, although these base rates can vary across pieces. As a result, the piecewise model does not require any strong assumption about the exact form of duration dependence. After exploratory analyses, we decided that a reasonable specification uses break points at 5, 10, and 15 years, corresponding to four intervals, with the last open on the right. The first segment includes spells within the first 5 years of tenure, the second segment includes spells between years 5 and 10, the third segment includes spells between years 10 and 15, and the fourth segment includes spells after 15 years of tenure.

Independent Variables

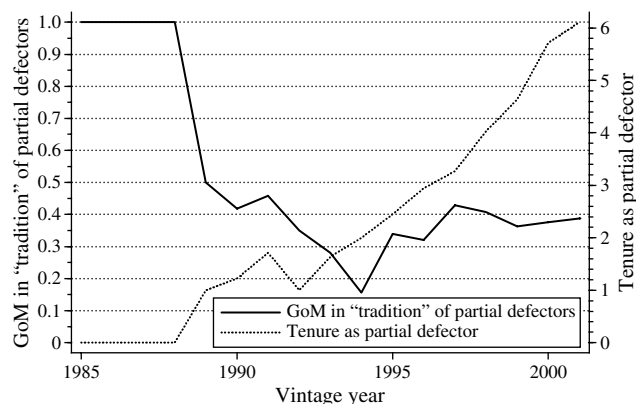
We conceptualize the two interpretations as *styles* (Hsu et al. 2007, 2009; Negro et al. 2010). We follow the idea that distinct styles are associated with each of the two methods of wine aging, old style (using *botti*) or new style (using *barriques*). Accordingly, we defined the function $\mu(s, x, t)$ that denotes the GoM of the producer x as an exponent of the style s at time t . We measure a producer's GoM in the old style in each vintage as the proportion of its Barolo/Barbaresco labels that received only *botti* aging. Then the GoM in the new style is the complement of this proportion: 1 minus the GoM in the old style.³ A producer's style profile is a pair of GoMs: $\{\mu(\text{trad}), \mu(\text{new})\}$.

At one extreme, we have producers such as Cantine Bartolo Mascarello, Giuseppe Rinaldi, and Cooperativa Produttori del Barbaresco, whose GoM function in the styles is $\{1, 0\}$ because they age all their Barolos/Barbarescos in *botti*. At the other extreme, we have producers such as La Spinetta and Rocche dei Manzoni, which use only *barriques* (GoM function $\{0, 1\}$). In between, we encounter wineries that combine the styles in all wines, such as Einaudi and Marchesi di Barolo, whose GoM in the styles is $\{0.5, 0.5\}$.

To test our first hypothesis, we must measure the degree to which defectors fit the schema for the traditional style. From the producer-level GoMs we calculate two variables, the average GoM in the “tradition” of partial defectors (*average membership in “traditionalist” style of partial defectors*) and the average GoM in the “tradition” of the producers who entered as category straddlers (*average membership in “traditionalist” style of de novo spanners*). We include the defector GoM in “tradition” to test the first hypothesis and add the de novo GoM in “tradition” to account for remaining effects of category spanning. (The GoMs in “tradition” are lagged one vintage.)

To test our second hypothesis, we calculated the *average* number of years spent since producers who were “traditionalist” started using *barriques*. We add the *average tenure of de novo category spanners* to separate the effects of schema updates by producer type. Our hypothesis is tested with an interaction term between the

Figure 3 Grade of Membership in the “Tradition” of Partial Defectors and Their Tenure by Vintage



average GoM in “traditionalist” style of partial defectors and the *average tenure of partial producers since defection*. Figure 3 shows how the average GoM in “tradition” of partial defectors and the average tenure as partial defector vary over the study period.

Controls

Control variables include the producer's maximum rating in the Veronelli guide in the prior vintage (to address whether capability and/or perceived quality affects the adoption of unconventional practices). The number of different wines produced is added as a control for organizational size—larger wineries might be more inertial and therefore more resistant to trying the new approaches. The ratings and size variables are lagged one vintage. We add two dichotomous variables to address differences in defection across locations and local dynamics of organizational mimesis. The first variable equals 1 for producers located in La Morra (Altare's town, a hotbed of the new modernism) and 0 otherwise. The second variable is equal to 1 for producers located in the town of Barbaresco (where modernist precursor Angelo Gaja's winery is located) and 0 otherwise. These controls account for local influences on the adoption of unconventional practices. Next, we include controls for the density of traditionalist producers to account for the capacity of producers in the “traditional” category to sustain collective action, and the number of de novo spanners and partial defectors to account for population density-based processes of categorical defection. Also, we control for the overall quality level of each vintage to account for weather-related fluctuations.⁴

Finally, we include a dichotomous variable equal to 1 for vintage years from 1980 to 1985 (*pre-1986 period*) and 0 otherwise. As the “modernist” producers were organizing, a scandal broke out in March 1986 when 26 deaths were linked to the consumption of Italian wines that had been adulterated with methanol to increase alcohol content. Angelo Gaja recalled, “We started to make money with this business only after 1986,

after the methanol scandal. Before then, throughout the 1980s . . . wineries did not make money; merchants did.” In this sense, the methanol scandal facilitated the shift toward modernization. The scandal taught consumers that high-quality wines also meant higher prices and that buying from established winemakers was an important guarantee of quality. Adding period effects allows us to rule out a simple alternative story, that the pattern of defections simply tracks consumer tastes that vary over the period; e.g., there was little demand for the modern wines before 1986, but it increased sharply and remained high thereafter. The descriptive statistics and correlations for the variables used in the analysis of defections can be found in Table 1.

Results

Table 2 reports the estimates of hazard models to assess the conditions under which producers defected (begin using *barriques*). Model 1 includes effects of control variables only. The number of different wines made by a producer, our proxy for organizational size, does not significantly affect defection rates. Information reported by the Chamber of Commerce of Cuneo in 2000 reveals that there is not much size variation among these wineries; they are very small by international, and even national, standards. The median number of bottles produced for a vintage is 15,000 (Associazione Vignaioli Piemontesi 2000). We do not find any significant effect of the number of defectors or de novo spanners, but we do find some effect of local imitation, as shown by the positive effect of the La Morra variable.

Perhaps more surprisingly, tenure does not affect the hazard of defecting. One could expect the strength of the traditional identity to vary—and particularly to increase—with tenure. In hindsight, we think the lack of tenure dependence makes sense in the context. According to our reading of the situation, the “traditionalist” identity is construed in the debate over the insurgency and its methods. Moreover, this category construction becomes salient to the relevant producers at roughly the same time; in other words, the impact of the rise of the insurgency on the identity of those who have not yet changed their practices does not depend on their tenure.

The nonsignificance of the effect of tenure as a non-defector on the hazard also runs opposite to a potential rival explanation to our argument: a mover–stayer process, in which tenure is spuriously correlated with mobility.⁵ Suppose that the set of winemakers using traditional practices consists of two subtypes: a hard-core group committed to tradition and a set of pragmatists who happen to have begun with the old practices but are not committed. As the gain from using small French barrels grows, the pragmatists will tend to defect, but the hard core (producers like Cappellano et al.) will never defect. Eventually, the set of “traditionalists” will consist entirely of the hard core, and the hazard of defection

Table 1 Summary Statistics and Correlation Matrix Among Regressors for Analysis of Hazard of Defection from Tradition, 1980–2001

	Mean	Std. dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Maximum rating _{v,t-1}	1.920	1.020	—												
(2) Number of wine labels _{v,t-1}	2.140	1.660	0.383	—											
(3) Location: La Morra	0.142	0.349	-0.079	-0.092	—										
(4) Location: Barbaresco	0.093	0.291	0.072	0.091	-0.130	—									
(5) Vintage quality	90.2	6.3	-0.003	-0.050	0.026	0.017	—								
(6) Pre-1986 period	0.89	0.286	-0.012	-0.026	0.101	0.006	-0.092	—							
(7) Density of “traditionalist” category _{v,t-1}	39.8	26.7	0.152	0.063	-0.124	-0.028	0.022	-0.419	—						
(8) Density of de novo spanners _{v,t-1}	5.17	6.21	0.144	-0.025	-0.134	-0.029	0.264	-0.257	0.487	—					
(9) Density of partial defectors _{v,t-1}	14.3	19	0.132	-0.053	-0.152	-0.037	0.207	-0.236	0.513	0.946	—				
(10) Average membership in “traditionalist” style of de novo spanners _{v,t-1}	0.057	0.075	0.086	0.083	-0.066	-0.011	0.168	-0.237	0.693	0.433	0.344	—			
(11) Average membership in “traditionalist” style of partial defectors _{v,t-1}	0.625	0.349	-0.123	0.023	0.118	0.029	-0.013	0.336	-0.743	-0.517	-0.614	-0.428	—		
(12) Average tenure in category spanning of de novo spanners _{v,t-1}	2.95	1.24	0.139	0.031	-0.114	-0.031	-0.197	-0.340	0.658	0.395	0.398	0.447	-0.461	—	
(13) Average tenure in category spanning of partial defectors _{v,t-1}	1.75	1.79	0.161	-0.033	-0.141	-0.029	0.293	-0.307	0.602	0.959	0.948	0.482	-0.650	0.464	—

Table 2 Determinants of the Hazard of Defection from Tradition, 1980–2001

	Model 1	Model 2	Model 3
<i>Tenure</i> $0 < u \leq 5$	−4.34 (2.72)	−4.87 (3.90)	−3.54 (6.17)
<i>Tenure</i> $5 < u \leq 10$	−4.54 (2.74)	−5.15 (3.91)	−3.84 (6.18)
<i>Tenure</i> $10 < u \leq 15$	−4.13 (2.76)	−4.77 (3.92)	−3.44 (6.21)
<i>Tenure</i> > 15	−5.41 (2.81)	−6.02 (3.97)	−4.65 (6.16)
<i>Maximum rating</i> _{<i>v</i>−1}	−0.075 (0.154)	−0.121 (0.164)	−0.151 (0.172)
<i>Number of wine labels</i> _{<i>v</i>−1}	−0.002 (0.094)	0.029 (0.092)	0.022 (0.090)
<i>Producer location:</i>			
<i>La Morra</i>	1.28*** (0.291)	1.22*** (0.290)	1.30*** (0.285)
<i>Barbaresco</i>	0.259 (0.462)	0.210 (0.449)	0.274 (0.455)
<i>Vintage quality</i>	−0.002 (0.029)	0.019 (0.041)	0.029 (0.058)
<i>Pre-1986 period</i>	−15.2*** (0.285)	−14.2*** (0.435)	−14.2*** (0.445)
<i>Density of “traditionalist” category</i> _{<i>v</i>−1}	0.019** (0.006)	0.012 (0.011)	0.002 (0.013)
<i>Density of de novo spanners</i> _{<i>v</i>−1}	−0.042 (0.052)	0.011 (0.073)	−0.013 (0.086)
<i>Density of partial defectors</i> _{<i>v</i>−1}	0.033 (0.018)	0.010 (0.027)	0.036 (0.033)
<i>Average membership in “traditionalist” category of de novo spanners</i> _{<i>v</i>−1}		0.957 (3.00)	−0.624 (3.64)
<i>Average membership in “traditionalist” category of partial defectors</i> _{<i>v</i>−1}		−2.20*** (0.586)	−5.79*** (1.05)
<i>Average tenure in category spanning of de novo spanners</i> _{<i>v</i>−1}			0.210 (0.176)
<i>Average tenure in category spanning of partial defectors</i> _{<i>v</i>−1}			−1.47* (0.615)
<i>Average membership in “traditionalist” category of partial defectors</i> _{<i>v</i>−1}			2.90* (1.21)
× <i>Average tenure in category spanning of partial defectors</i>			
Pseudo log-likelihood	−115.9	−108.9	−104.2
Model X^2	16,119.7***	16,251***	17,482.5***
No. of producers	192	192	192
No. of events	62	62	62

Notes. Maximum-likelihood estimates of constant-hazard specifications. Standard errors (adjusted for clustering on producers) are in parentheses. *v* denotes a (rated) vintage year.

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

will drop to zero. In such a case, no collective-identity activation would be needed to cause the hazard to fall.

Model 2 tests the first hypothesis, that the success of the modernist insurgency in attracting partial defections eventually discouraged further defection. It shows that the average GoM in the “traditionalist” category among the partial defectors has a negative and statistically significant effect on the hazard of defection. This effect is strong in substantive terms: at its mean level, the GoM in the “tradition” for partial defectors reduces the multiplier of the rate of defection by 74.7%. The inclusion of the membership variables improves model fit over the first specification ($X^2 = 13.97$, $\text{Pr} < 0.01$, with two degrees of freedom). This evidence supports the first hypothesis. Moreover, the effect of the grade of membership in the “tradition” of the de novo producers who straddle “tradition” and “modernism” is small and not significant, which is also in line with our argument.

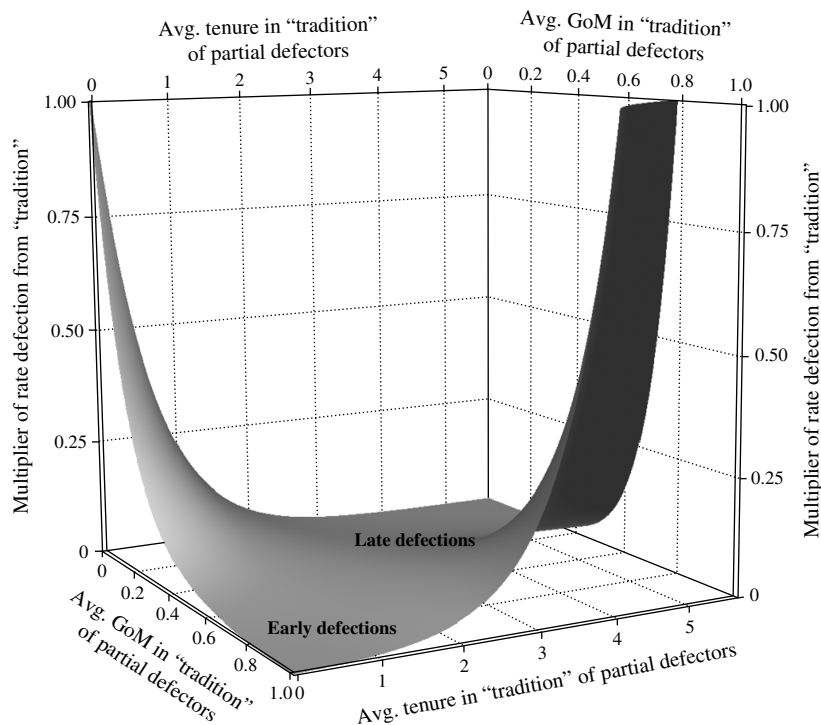
Model 3 tests the second hypothesis. The key interaction effect between GoM in the “tradition” of partial defectors with the average tenure of partial defectors since defection is positive and significant, and the inclusion of the tenure variables improves model fit over the previous specifications (compared with Model 2: $X^2 = 9.41$, $\text{Pr} < 0.05$, with three degrees of freedom; compared with Model 1: $X^2 = 23.37$, $\text{Pr} < 0.01$, with five degrees of freedom). The negative effect of schema

inconsistency, therefore, attenuates with the time spent in spanning categories, which is in line with our argument.

Insight into the substantive implications of these effects can be gained by examining Figure 4, which plots a three-dimensional surface whose vertical dimension is the predicted multiplier of the hazard of defection. The historical scenario we study begins at the front left edge of the graph, where defectors from “tradition” had low average tenure as defectors and a high average grade of membership in “tradition.” As the “modernist” insurgency gained traction, tenure in “tradition” increased, and GoM in the “tradition” of the partial defectors first decreased and then increased. This process traces a path toward the middle region of the space, where the predicted hazard is sharply higher. Eventually, tenure as a defector continued to increase, but average grade of membership in “tradition” stabilized. This causes the hazard of defection to also stabilize (at a level above the one at the origin). By our argument, the increasing fuzziness caused by defectors moving more to the middle of the continuum between the pure types defuses the mobilization of the “traditionalists” to defend their collective identity.

One might wonder why the contention between rival categories induced “traditionalists” but not “modernists” to close ranks. A symmetric activation could be expected if the same form of category straddling occurred in the two camps. Our data indicate, instead, a skewed pattern.

Figure 4 Effects of Average GoM in “Tradition” and Average Tenure of Partial Defectors on the Multiplier of the Rate of Defection



The number of producers moving away from tradition was large and consisted mostly of partial defectors ($N = 53$) who also maintained a high GoM in the “traditionalist” category (mean = 0.58). In contrast, we only found five partial defections from modernism and only one defector maintaining a higher GoM in the “modernist” category.

Alternative Mechanisms

What factors other than activation of collective “traditionalist” identity could inhibit defection? One alternative explanation is that some producers might have lacked the necessary capabilities or resources to adopt modern vinification practices. The estimates in Table 2 do not support this view. It was not the low-performing producers that accounted for the bulk of the defections. The maximum rating from the prior vintage has an insignificant negative effect on defection. If the most capable defected, then the capabilities involved did not show up in the wines as judged by the critics. Also, in unreported analyses, we do not find significant evidence that the rate of defection is affected by other organizational variables such as ownership form.

Another possibility is that the prospective defectors might anticipate penalties and, therefore, decide not to defect. If those who defected would tend to get penalized—they would not receive upgrades and would, instead, be downgraded by the critics. Negro et al. (2007) estimated the effect of defection on subsequent ratings and found defection increases the probability that

a maximum rating rises and reduces the probability that it falls. That is, defectors are rewarded with upgrades and are less likely to suffer downgrades.

Finally, perhaps broader shifts in the market account for the persistence of the rival interpretations. The information on export activities during our survey is clearly incomplete, but it indicates that “traditionalist” producers are not avoiding international competition. Of the 60 producers for which data are available, the difference in reliance on exports by traditionalists (71.6% of sales) and modernists (71.0%) is not significant. The difference is also not significant when “traditionalists” that did not defect are compared with defectors (65.5%).⁶

One could still argue that “traditionalist” producers are responding only to global processes that partition the wine industry into a mass/modern segment and a craft/traditional segment. As noted above, all the Barolo and Barbaresco producers are very small in scale by world standards. If the world wine industry is partitioning, its epicenter ought to lie outside the Langhe region and ought not to involve the opposition between categories inside the Langhe that our results demonstrate.

Discussion

As we see it, the modernist challenge and the reconstruction of the traditionalist identity as oppositional constitute a category reinterpretation. The modernist winemakers critiqued practices in the vineyard and in the cellar that had long been accepted and taken for

granted. This reinterpretation manifested a disagreement that caused audience members to attend more carefully to the characteristics of the category schema. The traditionalists' reaction offered a reinterpretation in defense of the old practices but also in opposition to the modernists' claims, where the oppositional part of the category schema was new—there could not be a countercritique before the critique. What we observed is indeed a pair of oppositions that culminates in the traditionalists' attempt to make the boundary crisp, similar to the case of real ale and microbrews (Carroll and Swaminathan 2000).

Research on categories in markets (see Hannan 2010 for a review) has largely focused on external audiences' categorization as an enabling and constraining factor for valuation of producers and/or their offers. Previous research has shown that association with multiple categories causes producers to be perceived as poorer fits with category schemas than specialized counterparts and that poorer fit reduces appeal to relevant audiences (Zuckerman and Kim 2003, Hsu 2006, Hsu et al. 2009, Kuilman and Li 2009, Ruef and Patterson 2009, Negro et al. 2010). Our study brings attention to the role of insiders by suggesting that collective identity can be organized to maintain categorical distinctions. At the same time, the findings highlight the role of identity heterogeneity within categories. When market agents aim at differentiating at times, this can encourage efforts to distance their identity from those of their peers. However, differentiation can threaten the consensus around schemas when distinct identities share the same category label.

Our study has potential implications for identity politics (Bernstein 2005), which examines collective action on the basis of identities, where identities form a part of the basis for grievances. Identity politics is political in the sense that interactions between groups, access to state actors, and opponents determine the types of identities expressed; thus identity is one type of practice in which groups engage to transform dominant cultural patterns (Armstrong 2002). Identity politics concerns identity in the sense that constructing and reconstructing collective category schemas is a goal more than an instrument of collective action that offers fulfillment (Bernstein 1997). In our analysis, traditionalist producers, initially neglected by the audience, seek to maintain schematic divides to express a collective identity. Their action intensifies when the fuzziness of their category schema and the risk of being submerged by an alternative schema are greater but weakens when the schema assumptions are revised.

In another area of study that applies to industries and markets, the notion of institutional logics—the set of assumptions, values, beliefs, rules, and schemata that provide meaning to material practices in society (Friedland and Alford 1991)—researchers have explored

that competing meaning systems replace, clash with, or coexist with one another (Stark 1996, Haveman and Rao 1997, Thornton and Ocasio 1999, Rao et al. 2003, Rao and Giorgi 2006, Schneiberg et al. 2008). In this perspective, groups of agents identify with and use these logics purposively. Studying the merger activities and career mobility that transformed Lloyds Bank from a regional organization into a national bank, Stovel and Savage (2006) argue that bank directors favored mobility of newly hired employees rather than lateral transfers that violated the principle of local banking supported by workers of merged banks. Only after a merger wave did the new logic become accepted and lateral transfers spread. Bank directors seemed mindful that confusing boundaries by changing the identities of insiders could generate organizational tensions and challenge the integration process. The initial defense of a collective identity was as crucial for local workers as it was for our traditionalist producers, and disputes could be partly settled by durable spanning of category boundaries.

The dispute over label interpretations also highlights issues of authenticity associated with category membership. In the context studied here, it is tempting to portray modernists as inauthentic and driven by money and traditionalists as driven by love. In this view, profit-maximizing modernists seek high prices, and utility-maximizing traditionalists *consume* tradition and so choose lower prices (Scott Morton and Podolny 2002). Such a portrait treats individual producers as atomistic decision makers and overlooks the collective sources of identity and motivation. Modernists themselves had to mobilize collectively to construct the “modernist” category and to gain supporters from new entrants. Traditionalists argue that *barrique*-aged Italian wines are no different from Californian wines and are, therefore, inauthentic reflections of the terroir. The activation of their identity involved technical and ideological claims and resulted in adherence to conventions even in the presence of evident gains from defection. Some producers persisted with traditional practices because they defined themselves in terms of the land and its terroir, and they believed that the only authentic way to make Barolo wine was to use *botti*. In this sense, weak pragmatic justifications make traditions more meaningful (Hobsbawm 1983).

Instead of a struggle between authentic and inauthentic styles, the case we analyze presents a compelling example of competing views of authenticity based on differing interpretations of categorical schemas. On one hand, the modernist interpretation of winemaking constitutes a different claim of authenticity, one that embraces creativity. Breaking with traditional practice and adopting *barriques*, among other technologies, was motivated by a desire to make original (and technically excellent) wines. On the other hand, “traditional” producers

espouse a notion of authenticity as conformity to conventions and “natural” processes (Peterson 1997, Rozin 2005). The latter group reacted collectively when it faced the risk of a loss of distinctiveness of category boundaries because of straddling, particularly by the contradictory position of producers that defected to modernism but maintained a stronger perceived resemblance to tradition.

Thus, our study makes a broader contribution to research on authenticity and illustrates that authenticity is intrinsically a polemical concept (Trilling 1972, Spooner 1986). We suggest that one interpretation of the category (the “modernist”) embodies authenticity by intervention that leads to originality in the main interest of gaining good outcomes in the market. The other (the “traditionalist”) seeks authenticity through rule-based abstention that leads to genuineness. These opposed meanings evoke the distinction between type authenticity (conformity to a type) and moral authenticity (sincerity of commitment to a set of values) proposed by Carroll and Wheaton (2009). Our study suggests that these types are intertwined. On one hand, the concerns of “traditionalist” producers were not only premised on stylistic conventions but were also permeated by a moral view of what it means to be a category member. On the other, “modernist” vintners sought to find their own creative voice by challenging the style of established conventions.

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Appendix. Data on Methods of Production

We relied on the Veronelli guide because it provides the most comprehensive data on Italian wines and covers more wineries and a much longer period of time than alternative data sources like *Gambero Rosso's Italian Wines*, Parker's *Wine Advocate*, or the *Wine Spectator*. The Veronelli guide has reviewed more than 10,000 “good Italian wines” by 2,000 “good winemakers” every year since 1991, and it is considered an authoritative source on wine in Italy. Its founding editor, Luigi Veronelli, was internationally acknowledged as Italy's most celebrated wine and food critic. The Veronelli guide enjoys wide circulation among expert and nonexpert audiences, including wine merchants, restaurant sommeliers, and consumers seeking direction in their purchase decisions. The annual list of

outstanding wines has achieved high prominence inside and outside the industry. For example, the release of a new edition of ratings receives broad coverage in the media and is featured in every major Italian national newspaper.

The guide provides information organized by producer and geographic location. Three key product details are displayed: the type of barrel used to age the various vintages of each wine, the retail price category, and a critical evaluation. The evaluation follows a tasting done by Luigi Veronelli and his three coeditors; all of them are wine experts. (After Veronelli's death in 2004, the coeditors continued the operation.) The guide rates each wine employing a single-blind tasting method. In fact, this data source is regarded as reliable and impartial.

The observation period for our data corresponds to the vintages covered by the guide during its first 15 editions, beginning in 1991 and ending in 2007. The Italian law regulating wine appellation systems requires that the products age for a period variable from at least two (Barbaresco) to at least three (Barolo) years prior to their release on the market and, consequently, to their review by the critics. Such a rule imposes a systematic time lag on the structure of our data. For example, the 2007 edition reviews wines from the vintages of 2001, 2002, and 2003 as the latest available for Barbaresco and 2001 and 2002 for Barolo. Yet the coverage of 2002 is incomplete because *reserve* labels are released after five years of aging. To allow for full comparability across the producers, we end our observation window in 2001. All our interviews revealed that experimentation with cellar techniques was negligible before the 1980s, and we start our analysis with the vintage of 1980 (restricting the initial date of observation avoids inflation in the estimated effects of the use of traditional techniques). Our most inclusive sample consists of all producers of Barbarescos and Barolos and their respective labels, which have received a rating in the Veronelli guide. The risk set included in the analysis is the subsample of traditional producers who age all their wines in large casks (*botti*). The subsample is composed of 192 different producers and 1,140 producer–vintage spells.

Endnotes

¹Throughout, we distinguish what linguists call the object language (in this case, the language of the producers and audiences we analyze) from the so-called metalanguage or analytic language of the authors by placing terms in the object language in quotes.

²This quote and those that follow come from our interviews with winemakers and wine critics.

³Negro et al. (2010) employ a similar approach to conceptualize and measure GoM and category fuzziness. They consider “traditionalist” and “modernist” as the candidate interpretations of Barolo and Barbaresco winemaking. However, they note that some audience members, notably the critics, identify three possible styles in which each wine label can be produced—“traditionalist,” “modernist,” and a hybrid labeled “international” that mixes *botti* and *barriques*—instead of two. Our study focuses on modeling defection rates from the “traditional” category and is concerned with the categorization as seen by the producers. For “traditional” producers, the crucial marker is the sole use of *botti*, so they tend to have a more simplified conception of the field in which only two categories operate. Consequently, we follow this account in our analysis.

⁴We use the quality ratings assigned by the *Wine Advocate* magazine to wines produced in the Piedmont in each vintage (<http://www.erobertparker.com>). The ratings are expressed using a 100-point scale ranging from 50 (appalling vintage) to 100 (extraordinary vintage).

⁵We examined the issue of heterogeneity within the “traditionalist” category with available data in another (indirect) way. In our telephone survey, we asked producers if they used practices that can be viewed broadly as nontraditional, such as the use of rotofermentor machines (spinning, horizontal tanks that help mixing the juice and skins when the layer of grape skins (cap) rises to the surface of red wine during fermentation). We calculated a dummy for producers that had ever adopted rotofermentor machines as 1 and 0 otherwise. In unreported analyses we added this variable to the specification of Model 2 and found that (i) it has a positive (but statistically nonsignificant) effect on the rate of defection from tradition, (ii) our other findings are unaffected, and (iii) the model fit does not improve significantly.

⁶Of the 60 producers, 43 began as “traditionalists,” 32 of which never defected; 11 did. Seventeen producers started as “modernists.”

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