

**CATEGORICAL CONTRAST AND AUDIENCE APPEAL:
NICHE WIDTH AND CRITICAL SUCCESS IN WINEMAKING**

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Categories play a consequential role in markets. Product categories structure the understandings of producers, critics, and consumers—they allow producers to identify rivals and critics and consumers to compare offerings. Category straddlers generally lose appeal because they confuse audiences by not neatly fitting with their expectations. For instance, stock analysts tend to ignore firms that span two or more of their categories, which causes their stock prices to decline (Zuckerman 1999); film actors who have participated in multiple genres are less likely to find work (Zuckerman, Kim, Ukanwa, and von Rittman 2003); films that critics classify as belonging several genres get lower critical evaluations (Hsu 2006); and sellers auctioning items in multiple categories on eBay are less likely to complete transactions (Hsu, Hannan, and Koçak 2007).

Hsu (2006) and Hsu et al. (2007) frame the issue of category spanning as an instance of the broadening of a niche in a space defined by a collection of categories. Viewed in this light, the studies of straddling provide a new foundation for the argument for specialist advantage by highlighting the role of appeal to audiences. However, these studies also point to important challenge: developing a theory of niches in category space that allows boundaries to be responsive to category spanning.

Widespread straddling of categories can lower the differentiation of the categories and diminish their cultural potency (DiMaggio 1987). Rao, Monin, and Durand (2005) found that pervasive straddling of the boundary between classical and nouvelle French cuisine weakened the boundaries of these categories and diminished the critical penalty for straddling. These authors conjectured that the reason is critics cannot patrol categorical boundaries because of increased monitoring costs.

Prior research leaves two key questions unanswered: What are the mechanisms by which widespread straddling lowers appeal? When does it pay to be full-fledged member of a category? These considerations constitute the motivation for our paper. We argue that widespread straddling lowers the contrast of a category and that lowered contrast reduces the appeal of offerings in the category through direct and indirect effects. The direct effect arises because low contrast means that many bearers of a category label are seen as marginal members of the category (as we

explain below). In such cases, audience members will likely encounter many producers who bear the category label but conform only partially to their schemas for the category. The indirect effect is that lowered contrast undermines agreement about the meaning of the category among audience members. When audience members agree only partially about the meaning of a category, it is unlikely that any given offering will appeal broadly to an audience.

We suggest that contrast can be measured as the average width of niches in a space of fuzzy categories. Having a broad niche in a category space means having positive grades of membership in multiple categories. We predict that the appeal to an audience of all offerings in a category will decline as average categorical niche width rises, as multiple-category memberships proliferate.

We also predict that specialization offers advantages, that audience members generally prefer the offerings of specialists, those who belong to only one category. However, we also argue that the gains to categorical specialization will decline as the average width of categorical niches increases. In short, being a full-fledged member of a category does not convey advantages when it becomes so fuzzy that it no longer contrasts sharply with the rest of the social field.

We test these arguments in the context of wine-making in the Barolo and Barbaresco districts in Italy. Winemakers there can make wines in different styles—traditional (as signaled by aging wine in large Slavonian casks), an international style (signaled by aging in smaller French barriques), or a mixed style (signaled by relying on both types of aging methods). We use critical evaluations of these wines from two yearly Italian wine guides. The study of how widespread stylistic combination influence audience appeal and reduce the benefits of specialized offers advances the analysis of fundamental boundary processes in markets.

THE SETTING: STYLES IN MAKING BAROLO AND BARBARESCO WINES

We analyze producers of Barolo and Barbaresco wines, which are generally regarded as among the world's greatest wines. Our attention was drawn to this setting partly because it became a hotbed of contention over authenticity in styles and methods during the 1990s.

Production of each wine is controlled by a written legal code, a *Disciplinare di Produzione*, which specifies the properties that must be satisfied for a wine to be labeled a Barolo or a Barbaresco. Although these detailed codes require the exclusive use of Nebbiolo grapes grown in a delimited region of the Langhe (in Italy's northwest Piedmont) and aging in wood for specified periods, they do allow discretion on other key choices such as the duration of maceration (during which the tannin-laden skins remain in contact with the juice), whether fermentation relies on the naturally occurring yeasts of the vineyard and cellar or on yeast purchased from a laboratory, and

whether the temperature of fermentation is controlled. It also leaves open the kind of barrels used for aging. Choices on these dimensions generally affect color, aroma, and taste. Although each of these options became a source of some contention when producers began to vary these techniques to produce initially a French style of Barolo/Barbaresco and later a more “international” or “New World” style, the type of aging vessel became the main focus. The barrels/casks have a visible presence in the winery over the whole cycle of production and can easily be seen by critics and consumers who visit a winery (such visits are an important marketing tool for wineries).

Traditionally these wines were aged in large casks (*botti*) made from Slovenian oak or chestnut. These casks are generally very large; indeed they can be as large as 120 hectoliters (hl). Reliance on traditional *botti* was challenged by modernists who began aging wine (partially) in *barriques*, small (usually 2.25hl) barrels made from aromatic French oak. Angelo Gaja, generally regarded as the initiator of the use of *barriques* for these wines, sought to compete with the great wines of Bordeaux. Other early users of *barrique* for Barolo production, notably Elio Altare, emulated the great wines of Burgundy (and sought to command similar prices). We think that it is revealing that participants in this Italian wine world use the French name for such a barrel, especially in light of the fact that the Italian language has a word for it: *fusto*.

Because the traditional *botte* has a much smaller surface-to-volume ratio than a *barrique*, the wood does not have nearly as much influence on taste with the traditional method. In late 2005 Gianni Fabrizio, a senior editor of the Slow Food organization’s influential *Gambero Rosso* wine guide (one of our data sources) summarized the advantages of using *barriques*:

In modern winemaking *barriques* are important because they allow two things that have been crucial for the great success of Barolo. First of all, *barriques* overcome a big problem of Nebbiolo: the light color of the wine. *Barriques* fix the antocyanins, so the color is deeper. Second, *barriques* induce higher exchange of oxygen, which makes tannins form longer chemical chains, 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.

The *barrique* became a symbol of modernity. The French-style Barolos and Barbarescos aged (partly) in *barrique* found favor with the critics and consumers in the 1990s; and many vintners followed the lead of Gaja and Altare. This stylistic insurgency sparked a traditionalist countermobilization around regional typicality that sought to preserve traditional practice as the essence of authenticity (Negro et al. 2007). It championed wines with tastes unique to Barolo/Barbaresco rather than those that tasted of French styles or the ascendant “international” style of winemaking.

Although traditionalists regard *any* use of *barrique* as signaling a modern or international style (Negro et al. 2007), some critics do not accept that view. Indeed, a considerable diversity in methods of production and associated styles persists despite the strong categorical opposition between tradition and modernity; and there might be more than one modern style. Early modernists, such as Gaja, Altare, and Enrico Scavino, used *barriques* in combination with *botti* to create a softer, more approachable style with a moderate influence of oak on taste. A later branch of modernism opted for a more extreme “international” style with more highly extracted, darker, and more obviously oaked wine. Exponents of this style, such as Rocche dei Manzoni, La Spinetta, and Conterno-Fantino, use only *barriques*.

Producers, critics, and enthusiasts debate whether combining aging methods constitutes a middle-ground style between the traditional pole and a fully “international” style. The predominant view acknowledges the existence of a distinct “middle” style. In a recent newsletter (Esposito 2008) one of the leading experts on Italian wines, elucidates this point:

It seems like a simple, straightforward question—traditional or modern? But in Piemonte, there are no easy answers where style is concerned. While there used to be a very fine line between the two styles, that narrow middle ground has virtually exploded, rendering classification almost impossible.

This judgment is espoused by the other industry operators. We collected a number of other comments that similarly defended the distinctiveness of the middle ground style but for brevity we report only a statement from one of the Barolo producers we interviewed: “We like the taste of our wines to express variety. We define ourselves as alternative, we don’t believe there are only these two categories, but there is a range of possibilities.” If audiences recognize them, then three styles must be considered, each corresponding to a different production method. We use this kind of representation in our analysis.

A winery’s portfolio might consist of several labeled Barolos and/or Barbarescos and, therefore, potentially of a range of styles. A producer can focus narrowly by producing wines only in one style. Above we gave well-known examples of the pure types. Other wineries produce portfolios with a mixture of types. For instance, both Poderi Luigi Einaudi and Cascina Ballarin produced one *botti*-aged wine, one *barrique*-aged wine, and one middle-style wine in some vintages; and the Marchesi di Barolo winery has sometimes produced two labels of each style.

We conceptualize these differences by characterizing *style niches*. We follow Hsu et al. (2007) in defining GoMs in production styles. We set a producer’s GoM in a style in a vintage to the proportion of its portfolio in that vintage that comes from the focal style. In the case of the focused traditional producers such as Bartolo Mascarello, Giacomo Conterno, and Giuseppe

Rinaldi, the style niche is $\{1, 0, 0\}$. For focused modernists (internationalists) such as La Spinetta and Rocche dei Manzoni it is $\{0, 1, 0\}$. For focused middle-of-the-road producers like Gaja and Enrico Scavino, the style niche is $\{0, 0, 1\}$. At the unfocused extreme (cases such as Einaudi and Marchesi de Barolo), this niche is $\{0.33, 0.33, 0.33\}$. Lack of focus means a broad niche; and we use the width of a (fuzzy), as defined in equation (1), to represent the idea. Of course, the minimum possible value of niche width is zero (meaning complete focus). The maximum possible width with three styles is $2/3$, which indicates a complete lack of focus.

IMPLICATIONS OF THE PREDICTIONS IN THE EMPIRICAL CONTEXT

Straddling styles clouds the boundaries among styles. If style specialists predominate in a population of producers, then the perceived distinctions among styles will generally be sharp. Critics and knowledgeable consumers have a reasonable chance of schematizing the differences among styles in such situations. Such was apparently the case when Gaja, Altare, and others first challenged the status quo in Barolo/Barbaresco production by introducing wines aged partly in *barriques* (and making other related changes such as shortening maceration times and controlling fermentation temperatures). The critics had little difficulty distinguishing these new products; and they reached agreement about what makes a wine “modern” (soft tannins, fruitiness, high concentration, etc.). During this period, all makers of Barolo and Barbaresco were style specialists, meaning that the average width of style niches was zero.

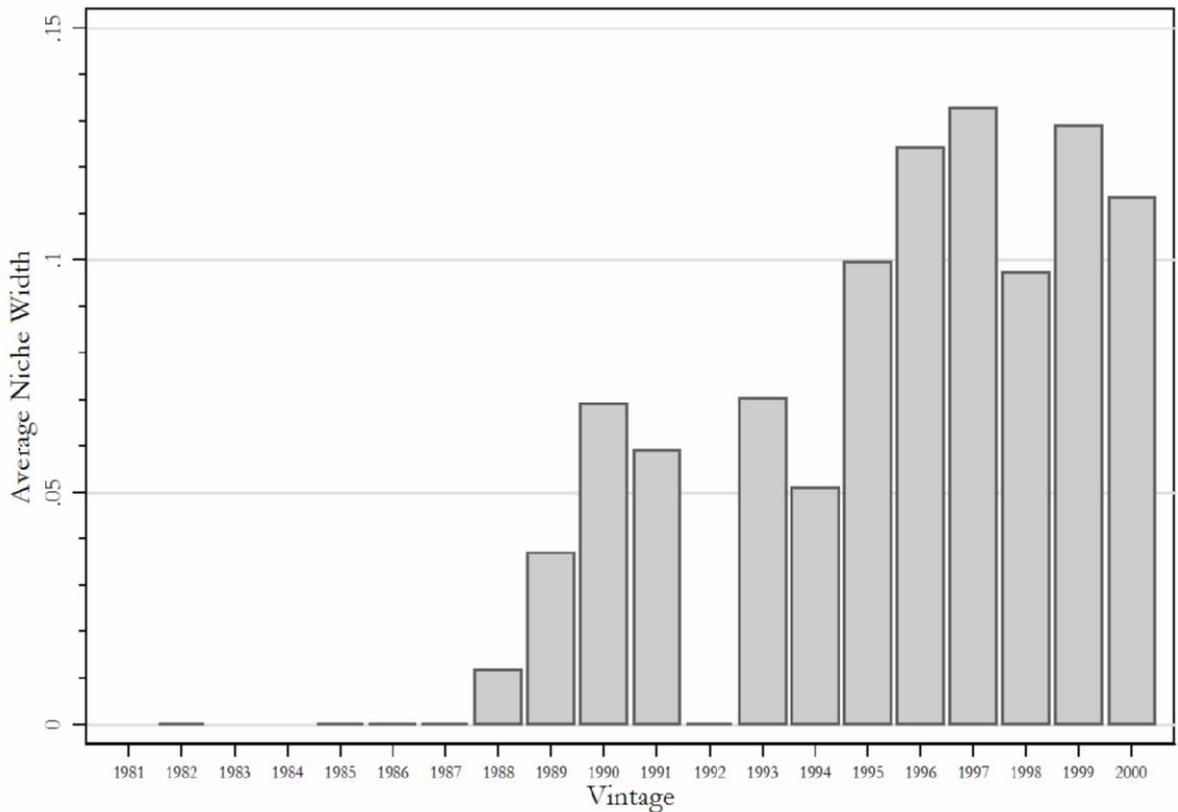


Figure 1. Level of Average Width of Style Niches (Contrast) Over Vintages

Over the study period, the average width of style niches has grown (Figure 1). We suggest that this trend might have affected critics and enthusiasts in the audience in two ways. First, a weakening fit between schemata and practice might make it more difficult for critics to identify wines that clearly stand out from the rest, making them deserving of very high evaluations. Second, the consensus among critics about the standards for judging wines as instances of styles might break down in the face of growing diversity of product attributes. If critical success depends on the agreement among the critics that a product is excellent and consensus weakens, then fewer wines will be collectively stamped as outstanding (especially as compared with other elite Italian wines that these critics evaluate). In fact a lack of consensus would tend to reduce the chances that a wine is generally considered to lie at either extreme of the quality scale, but the critics appear to take more care in making evaluations at the top of the scale (see the Appendix). Both processes should cause the average level of appeal to critics and knowledgeable audience members to decline as average niche width increases, and this mechanism should be most discernable in the upper ranges of quality.

Our interviews suggest that critics and wine journalists share this intuition. An editor of the *Gambero Rosso* guide said “Everybody is in trouble when it comes to judging these wines, because they are unquestionably well-done wines, but less representative [of the territory].” A co-editor of the *Veronelli Guide*, Daniel Thomases, remarked:

It happens that some producers were not too sure about which way to go, what technique to use, so they offer two products here and two products there... When that happens, I find it strange. A producer’s line of products should reflect a specific zone as well as that producer’s philosophy. A winery is not a supermarket.

The claim that a broad niche comes at the expense of appeal to the subaudiences at the positions covered by the niche appears to be sound in the empirical setting. Interviews with critics reveal that they employ schemas for the various styles. Although they often prefer one style (as we find empirically), they report that they generally evaluate wines as instances of a type.

Specializing in a style allows a vintner to become more expert in its production, better able to tune production decisions to fit the prevailing aesthetic schemas for that style. Such improved fit makes offerings more intrinsically appealing to the critics and audience members than those of style generalists (as long as the producers have similar scale of production or scale does not provide any advantage). In other words, niche theory implies that audience members who favor the traditional style will find the products of focused traditionalists more appealing than wines in the traditional style made by less focused producers. The same reasoning applies to comparisons of wines from unfocused wineries with those of focused modernists or focused centrists.

This inherent disadvantage of spanning styles becomes manifest when audience members can compare the offerings of specialists and generalists. (If no products of focused producers can be found in the market, then an unfocused producer’s offer will not face an obvious disadvantage.) However, the competitive arena in our empirical context contains unfocused producers as well as focused producers in each of the three styles. Hence we predict that the expected actual appeal of a wine decreases with the width of its producer’s style niche in this diverse market.

This reasoning holds whether or not the audience member can associate a producer with the product (as in a blind tasting). The consequences of reduced expertise due to generalism in styles inhere in the product. Nonetheless, audience members often do know who made a product. (As we describe below, for one of our sources, the critic usually knows the producer’s identity.) If the evaluators know (or even try to guess) who made a product, a lack of focus might affect construals of a producer’s identity.

Focus in a style connotes commitment; style diversity does not. Many of the winemakers we interviewed told us that they chose a focused approach because they believe that their wines must reflect their own tastes and identities. A leading traditionalist said: “Winemaking for me is not improvisation—it is the work that my father transferred to me, so it is part of my identity. I don’t want to erase my roots, my history, because it identifies me.” A focused modernist told us: “We like wines aged in *barriques*... The choice of how to age Barbaresco depends a lot on the personal tastes of each producer.” A focused middle-style vintner also emphasized a personal style: “Well, there are producers who are very traditionalist and others who are very modernist... [w]e stay in the middle; we use technology in order to improve the quality. But, at the same time, we respect the tradition.”

In contrast, some generalists tell that they employ diverse styles to appeal to different audiences. For instance, a leading producer in Barbaresco said: “The regular Barbaresco and this *cru* [pointing to a particular label] begin their honing in French *barriques* to fix the color... After six months, the wine is poured in the traditional 25hl Slovenian-oak *botti* in order to continue the aging for at least another year. The other *cru* has its whole 18 months of aging in the *barriques*. We decided to do that because we wanted to slightly differentiate the final product, and try to give a different sensation with this last one, because the *barrigue* gives a different taste.”

Another said “We use *botti* and *barriques* and try to get the best out of it. That’s why we also have two labels. One American critic defined us as hesitant (*indeciso*). Every journalist wants you to identify yourself, to line up. But what is the sense in that?” Some vintners said that they diversified to meet market demands. For instance, one who produces both a traditional and a modern wine said “I employ *barriques* only because the market demands it of me. If it were my choice, of course I wouldn’t use *barriques*.”

For luxury products like these wines, consumers arguably prefer the offerings of more committed producers. If this is so and if audience members perceive a broad style as signaling a lack of commitment, then critics and consumers will find the wines made by focused wineries more appealing. Thus the identity based argument points in the same direction as the argument based on expertise and knowledge of audience schemata for types.

To summarize, we predict that:

1. Reduced contrast among types (high average categorical niche width) lowers the expected appeal of all wines in a category.
2. Generalism lowers the expected appeal of a producer’s wines.
3. The effect of producer generalism on expected appeal weakens as contrast declines.

ANALYSIS

We assess a wine's appeal to an audience by examining the reactions of one type of market intermediary: critics. We analyze evaluations by two influential critical publications: *I Vini di Veronelli* (hereafter Veronelli) and the Gambero Rosso's *Vini d'Italia* (hereafter GR). We analyze their ratings of Barolos and Barbarescos from the vintages 1982–2000. Our unit of analysis is a triplet consisting of a producer, a labeled wine, and a vintage. We analyze only those triplets for which the wine was reviewed by both sources for that vintage. Our sample includes 1,952 label-vintage-producer observations for 164 producers.

We also rely on additional material drawn from (i) semi-structured interviews with a forty-five experts including winemakers, wine journalists, and oenologists in the Piemonte area and elsewhere in Italy during 2005–7, and (ii) a phone survey we conducted in 2006 on all Barolo and Barbaresco producers appearing in the dataset and that concerned choices of vinification methods.

Both guides use ratings to communicate ordered assessments of appeal/quality and we employ these ratings as the dependent variables for our analysis. Veronelli assigns each labeled wine a rating expressed in stars: one star (“good wine”), two stars (“optimal wine”), three stars (“excellent wine”), and “super three stars” (an award of distinction).¹ GR assigns one glass, two black glasses, two red glasses, and three (red) glasses (where red is a higher ranking than black). According to figures reported in Table 1, the two guides differ somewhat in the frequency of assignments of ratings. GR has a smaller fraction in the top rating (5% versus 10% for Veronelli) and more in the lowest category (16% versus 9% for Veronelli). The guides also show only a modest level of agreement: the Spearman rank-order coefficient, a measure of correlation for ordinal data such as these rankings, is roughly 0.40. As the previous sections outlined, we associate styles with aging methods and calculate niche width using information about producers' profiles of wines. We treat the evaluations (number of stars/glasses) as ordered, as the sources clearly intend, and we estimate ordered logit specifications. This means that we interpret the discrete ratings as cut points on an underlying metric dimension (appeal/quality) that is not directly observed. The standard formulation for the ordered logit can be expressed as $A = \mathbf{x}'\boldsymbol{\beta} + \varepsilon$, where A (appeal) is unobserved, \mathbf{x} is a vector of covariates, and the disturbance ε has a logistic distribution. The observable ordered categories are related to the unobservable latent variable

¹Veronelli assigns a trifolium symbol to wines reviewed for the first time. This indicates overall good quality of the wine but does not imply any specific rating. We exclude these observations from analysis.

according to the following rule: $Z = i$ if $\delta_{i-1} < A \leq \delta_i$, where δ_i ($i = 0, \dots, I$) are cut points and $\delta_0 = -\infty$ and $\delta_I = \infty$.

As our independent variables, we estimate the effects of niche width, the average niche width among all producers, and an interaction of the two.

We use (pseudo) maximum likelihood estimation with clustering by producer (to adjust for the likely lack of independence of ratings of wines made by the same producer). This method of estimation (implemented using the `vce(cluster)` option in Stata 10) fits an intraclass correlation for within-producer observations and calculates robust (sandwich) estimates of standard errors, net of the cluster effects.

We find the effects of the three terms involving niche width agree with the implications of the theory. The appeal of a wine decreases with the categorical niche width of its producer. Appeal also falls with contrast (the average niche width among producers); and the negative effect of niche width on appeal lessens as contrast (average niche width) increases. Each of these effects is highly significant for each dataset.

IMPLICATIONS

Our study speaks to the call for more research on the “the conditions under which boundaries generate differentiation or dissolve” (Lamont and Molnar 2002: 189). Indeed, use of fuzzy category theory allows us to treat situations that lie intermediate between the cases of clear and dissolved boundaries, those in which boundaries are blurred to varying degrees.

One clear contribution of our research is that it illuminates the endogenous origins of category erosion. It suggests that the boundaries of categories (styles, here) erode when actors create portfolios of products from diverse categories. Thus, it was easier for critics to dimensionalize the differences between modernists and traditionalists when the former relied on a combination of *barriques* and *botti* and the latter used *botti*. Pervasive increases in generalism introduce a kind of deregulated action and undermine the criteria for critical decisions and choices and thereby increase the costs of evaluation (White and White 1993; Rao et al. 2005).

By studying the connection of organizational capability and identity to the strength of categorical boundaries, our paper also highlights the cultural origins of organizational scope. A large literature on the economics of scope considers how internal coordination costs determine the efficient boundaries of organizations (Teece et al. 1994; Williamson 1985). Our study underlines the need to develop a theory of cultural scope to complement the theory of economic scope and to show how external processes, rather than internal coordination costs, shape the identities of organizations.

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