# How Cultural Tastes Shape Personal Networks

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*This article examines the relationship between different forms of cultural taste and the density of social contacts across alternative types of network relations classified by average tie strength. The author builds on Bourdieu's ([1986] 2001) classic statement on the "forms of capital" (economic, social, and cultural) and the conversion dynamics among them, and on DiMaggio's (1987) connection between cultural tastes and sociability. He hypothesizes that (1) in addition to cultural tastes being determined by network relations, cultural tastes are used to form and sustain those networks. Furthermore he expects that (2) highbrow culture taste will be less likely to be converted into social capital beyond immediate strong-tie circles due to its more restricted, "asset-specific" nature. Because of its generalized appeal, taste for popular culture will be more likely to be associated with weak-tie network density. The results broadly support these hypotheses: a model that specifies an effect of culture on network density provides a better fit to the data than the traditional conception of networks as determining taste. In addition using log-linear models and instrumental-variable methods, I show that popular culture consumption has a positive impact on weak-tie network density but not strong-tie network density, while highbrow culture consumption selectively increases strong-tie density but has no appreciable effect on weak ties, net of standard socioeconomic variables. These findings help to shed light on the mechanisms that translate mastery of different types of cultural knowledge into integration across distant social positions or closure around strong group boundaries. The author also discusses the implications of the results for current models describing the transformation of cultural into social resources.*

Most treatments of the relation between culture and social structure—going all the

way back to the classic statements by Marx and Engels (1939) and Durkheim ([1933] 1997:215, 276)—aim at explaining the connection between these two domains by highlighting the ways in which patterns of social relations affect the composition and structure of cultural systems (Bearman 1993; Douglas 1978; Martin 2002). Some of the more ambitious projects, such as formulations in which large-scale cultural formations are linked to social structure broadly conceived (i.e., Swanson 1967), have been criticized for positing an unwarranted "reflection model" of the relation between culture and society (Wuthnow 1985), in which culture is seen as somehow being isomorphic with social structure but the mechanisms that produce this convergence are left unspecified (Martin 1997:5). Bourdieu, for instance, dismissed this stance as the "short-circuit fallacy" (quoted in Wacquant 1989:33), whereby a "direct link" is

sought between what are in fact "very distant terms."

Dissatisfaction with this state of affairs prompted a conceptual turn from conceiving of culture as disembodied ideas toward thinking of culture as grounded in practice (Bourdieu 1990a; Ortner 1984; Peterson 1979), moving empirical research to focus on the study of concrete fields of social relations (Anheier, Gerhards, and Romo 1995; Kay and Hagan 1998). This shift was coupled with a revitalized view of culture as useful in practical strategies of social-boundary drawing (Bourdieu 1984; Lamont 1992; Lamont and Lareau 1988; Lamont and Molnar 2002; Peterson 1992, 1997). On the side of social structure, attention now focused on how *social networks* affect individual and collective tastes, preferences, and patterns of cultural involvement (DiMaggio 1987; Erickson 1996; Mark 1998a, 2003). Nevertheless, this line of research has for the most part treated cultural practices and patterns of culture consumption and taste as being primarily *shaped* and *determined* by social networks (DiMaggio 1987; Erickson 1996; Mark 1998a; McPherson 2004; Relish 1997), but never as being able in turn to have an effect on these networks.

We can refer to this pervasive assumption in the recent literature in the sociology of culture as the "traditional network model" of taste formation and taste transmission (Erickson 1996; Mark 2003, 1998b). Unquestioned allegiance to the traditional network model has precluded investigation of the question of whether cultural tastes and practices themselves have an independent effect on social structure (conceived as patterns of network relations), and if they do, *how* are different profiles of cultural tastes linked to variations in network characteristics. Exploring the implications of this alternative stance on the culture-networks link is important on both empirical and theoretical grounds. If cultural tastes can be shown to have autonomous effects on the composition of personal networks, then the simple model that sees cultural tastes and practices as *contents,* and that sees network relations as the *conduits* through which these contents are transmitted, will have to be revised. Further, shedding light on the question of reciprocal effects of taste on social networks will allow us to conceptualize more clearly the dynamic relation between cultural knowledge

and social structure in both small and larger social collectivities (Carley 1991, 1995; DiMaggio 1987; Mark 1998b; Collins 1988). This in its turn may help to connect those dynamics with research and theory on the practical use of cultural resources to create and transform network relations, as part of the situated conversational rituals that constitute the micro-interactional order (Collins 1988; DiMaggio 1987; Long 2003; Mische 2003; Mische and White 1998).

This article opens a path in this direction. Using nationally representative survey data for the United States, I examine the effects of two different styles of culture consumption, what have been traditionally referred to in the literature as "popular" and "highbrow" (Blau 1989; DiMaggio 1987; Emmisson 2003; Katz-Gerro 2002; Van Eijck 2001), on outcomes related to the properties of personal networks. In this manner I follow DiMaggio (1987:442) by focusing "on the ways that people use culture to make connections with one another" and Bourdieu ([1986] 2001) in clarifying the way that cultural and social capital are "transubstantiated" into one another and mobilized in practical action to attain desirable resources. In this way I aim to contribute to research and theory on the connection between cultural competences and network relations, a link that while receiving a great deal of recent theoretical attention, continues to be a relatively understudied topic in the sociology of culture (DiMaggio 2003). I draw theoretical motivation from Bourdieu's ([1986] 2001) original statement on the forms of capital and on network theory in order to show how dispositions toward certain broad forms of taste are connected to patterns of density in different components of the personal network.

The article is organized as follows: in the next section, I review previous theoretical proposals linking cultural knowledge and social relationships, in particular Carley's (1991) and Mark's (1998b) constructural model and DiMaggio's (1987) theoretical proposal connecting the consumption of culture related to the arts and "sociability" (Simmel 1949). I then focus on how insights from network theory can be integrated into these formulations. I go on to propose testable hypotheses in the following section, and I then present the results followed by a brief discussion and concluding comments.

## THEORETICAL BACKGROUND

### BOURDIEU AND THE FORMS OF CAPITAL

A prominent statement highlighting the mutual interconnection among economic assets, cultural dispositions, and access to social resources in the forms of network connections is Bourdieu's ([1986] 2001) classic essay "The Forms of Capital." Here Bourdieu presents a convincing argument for the fungibility among economic, cultural, and social resources. This is done through the *conversion hypothesis,* whereby economic capital is construed as capable of being transformed into cultural and social capital during the course of socialization into different class strata. Accrued social and cultural capital can then be partially transformed into economic capital throughout the life-course trajectory of individuals who originate from relatively privileged class fractions.

Social capital allows the individual to accrue benefits by facilitating the formation of durable networks of acquaintance, obligation, and recognition—Bourdieu's (1986] 2001:103) definition of social capital—and providing access to membership in prestigious groups. Cultural capital on the other hand, provides the person with the symbolic recognition afforded by mastery of specific dispositions toward collectively valued cultural goods (Mohr and DiMaggio 1995). More importantly, *embodied* cultural capital (Holt 1997)—in the form of specific "pieces" of knowledge that can be exploited and exchanged in conversational rituals (Carley 1991; Collins 1988:360; DiMaggio 1987)—allows the individual to enter prestigious groups and to participate in exclusively bounded networks, helping in the formation of social connections with other individuals endowed with similar tastes.

From this perspective, all of the forms of capital—social, cultural, and economic—are at least *in principle* convertible into one another. As Bourdieu ([1986] 2001:107) notes, "The convertibility of the different types of capital is the basis of the strategies aimed at ensuring the reproduction of capital (and the position occupied in social space) by means of the conversion work." Bourdieu, however, did not fully theorize the directional link going from cultural to social capital, focusing instead on the conversion of cultural into economic capital by way of the acquisition of "institutionalized" markers of the former, especially in the form of educational credentials ([1986] 2001:99–100, 102) and the analogous conversion of social into economic capital (Bourdieu 1996:329–30). In this article I am specifically interested in the alternative process of conversion of informal cultural knowledge (associated with different kinds of taste) into social connections. Recent research at the intersection of cultural sociology and network theory has indirectly dealt with the issue of conversion of cultural—defined as those portable parts of the culture that the person can deploy in interaction—into social capital.

### THE CONSTRUCTURAL MODEL

The Carley-Mark (Carley 1991; Mark 1998b, 2003) "constructural" model can be interpreted as an elementary schema of how culture can be translated into social connections, and how social structure (the distribution of chances to interact across persons in the system) and cultural structure (the distribution of cultural forms across persons) can be defined in an interdependent manner. The authors use a simple assumption of similarity (homophily), which postulates that the likelihood of a social tie increases with the cultural similarity between any given dyad (a dynamic process similar to the one proposed by Homans [1950: 108–121]). In this way the probability that two persons will interact is driven by their cultural similarity. Interaction, in this positive feedback loop, in its turn increases cultural similarity as individuals exchange their stocks of knowledge with one another.

While the constructural model breaks with the one-side view of the traditional network model by explicitly modeling both the acquisition of culture by way of social connections and the formation of new social ties by way of cultural similarity (because it is explicitly concerned with the conversion of cultural knowledge into social connections), it fails to specify *which* types of cultural knowledge can convert into *what* kinds of social connections.[1] This objection notwithstanding, the constructural

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[1] This is not meant as an explicit criticism of the model, since it is purposefully built on minimal assumptions regarding the essential interchangeable nature (homogeneity) of all "pieces" culture.

model opens a promising theoretical avenue beyond the one-sided concern with the effects of social structure on culture of conventional network theory, by providing a plausible mechanism through which cultural information can be transformed into network relations.

## CULTURE CONSUMPTION, THE ARTS, AND SOCIABILITY

A more detailed formulation of how the process of conversion of cultural into social capital might operate can be found in DiMaggio's influential article "Classification in Art" (1987). For DiMaggio, the most significant change in modern, (post)industrial societies consists of the rising role of the arts, and mass-produced culture in general, in providing the "baseline" forms of cultural capital necessary to maintain interaction across different types of network ties. This process acquires more importance as these network ties have been transformed in the contemporary context of increasing geographic mobility and the decline of the traditional bonds characteristic of primordial local communities (Wellman 1979), which used to be centered around kinship and spatial contiguity (DiMaggio and Mohr 1985).[2]

Personal networks are now more fluid, discontinuous, and less tied to geography and family (Castells 2000; Wellman 1979; Wellman and Wortley 1990), and popular culture and the arts increasingly serve as the "default" forms of knowledge that connect people across different "foci" of interaction (Feld 1982). Thus in contrast to material goods, which are "physically present and visible," cultural consumption is "invisible once it has occurred. This evanescent quality makes artistic experience, described and exploited in conversation, a portable and thus potent medium of interactional exchange" (DiMaggio 1987:442–43). This leads to the conclusion that "*[i]f there is a common cultural currency [in contemporary society], the arts (supplemented by fashion, cuisine and sport)*

*constitute it*" (DiMaggio 1987:443, emphasis added).

DiMaggio not only notes the role of the arts as a generator of cultural knowledge, and as one of the most important facilitators of informal interaction—or "sociability" in Simmel's (1949) sense of social interaction for its own sake—but also suggests that culture consumption may play different roles in either helping foster ties that lead to social closure or social bridging. DiMaggio remarks that in the modern system, "as Douglas and Isherwood write of goods, artistic tastes are 'neutral, *their uses are social, they can be used as fences or bridges*'" (DiMaggio 1987: 443, emphasis added). The consumption of arts and popular culture is therefore distinctive in this sense because it "provides fodder for least-common denominator talk, infusing conversation within local, socially oriented groups with time to spend on interaction for its own sake" (DiMaggio 1987: 43). More generally, the consumption of cultural goods and performances thus can serve as a bridge not only to sustain current network connections but also to gain and cement new ones. This is because the consumption of arts-related culture and other aesthetic products "gives strangers something to talk about and facilitates the sociable intercourse necessary for acquaintanceships to ripen into friendships" (DiMaggio 1987:443).

Communication theorist John Fiske (1987) concurs with DiMaggio's assessment of the pivotal role that arts and popular culture consumption play in facilitating social interaction—by way of serving as topic for conversation—in contemporary industrial societies. For Fiske, while there has been much critical attention devoted to "the mass media in a mass society," he notes that most analysts have tended to ignore "the fact that our urbanized, institutionalized society facilitates oral communication at least as well as it does mass communication." Although the household is now the primary site of leisure culture consumption, it is important not to forget that most individuals "belong to or attend some sort of club or social organization. And we live in neighborhoods or communities. And in all of these social organizations we talk. Much of this talk is about the mass media and its cultural commodities." For Fiske, these cultural commodities take on primarily expressive functions,

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[2] As Wellman and Wortley (1990) point out, this does not mean that strong bonds disappear in contemporary urban contexts, but simply that they lose their correlations with ascriptive characteristics such as kinship.

enabling the representation of "aspects of our social experience in such a way as to make that experience meaningful and pleasurable to us. These meanings, these pleasures are instrumental in constructing social relations and thus our sense of social identity" (Fiske 1987:77–78).

Fiske's and DiMaggio's framework is useful because it allows us to see how the consumption of publicly available and mass-produced cultural goods results in the acquisition of cultural capital when individuals endowed with the requisite dispositions consume those objects (Bourdieu 1984). This cultural capital can then be linked to the relative prevalence—or comparative lack—of different types of network relations (fences or bridges). This conversion of cultural into social capital functions in the same manner as would be expected by Bourdieu: it is transformed into social and (later on) material resources that are beneficial for the individual concerned: "taste then, is a form of ritual identification and a means of construction social relations. . . . It helps to establish networks of trusting relations that facilitate group mobilization and the attainment of such social rewards as desirable spouses and prestigious jobs" (DiMaggio 1987:443).

In the following section, I begin the task of outlining a model of how such a transformation of different types of cultural capital into alternative kinds of social capital might take place.

## THE CONVERSION OF CULTURAL INTO SOCIAL CAPITAL

### Weak Ties and Strong Ties

Do different types of cultural tastes lead to the formation and sustenance of different types of network relations? To gain empirical and theoretical purchase on this question, I adopt the fundamental distinction in network theory between *strong* connections related to frequent, local interactions (and that are relatively more probable to cover a short distance in sociodemographic space—connecting people with individuals similar to them) and *weak* connections characterized by relatively infrequent, extra-local interactions (and that are more likely to span a larger distance in sociodemographic space—connecting people to dissimilar others) (Chwe 1999, Granovetter 1973, Lin, 2001). This distinction is helpful in bringing much needed specificity to the starting idea (Jasso 1988:4)

built around a process of "conversion" of cultural into social capital, and in helping us begin to theorize the link between types of culture consumption with more specific forms of network composition.

### HIGHBROW AND POPULAR TASTE

In the context of taste for cultural products associated with the artistic sector, tastes and consumption practices appear to cluster around two dominant styles (or forms) of taste (Katz-Gerro 2002: 217–218) that have come to be referred to as *highbrow* and *popular*. As Van Eijck (2001:1168) notes, highbrow taste is characterized by an emphasis on the consumption experience as helping to foster an attitude of "transcendence" and is thus infused with the classical Kantian aesthetic in which cultural products are seen as a conduit for intellectual and emotional impressions that reflect "higher" moral and aesthetic values. Popular taste, on the other hand, is geared toward a more superficial hedonic engagement with culture, with "fun" and "pleasure" as the primary goals of cultural involvement. This is essentially the same distinction made by Blau (1989:433), who differentiates between an "elite culture" with a productive and distributive infrastructure centered around art museums, galleries, opera, theaters, symphony orchestras, and ballet and dance companies, and a "culture with broad popular appeal" that is primarily conveyed through live popular music concerts, general-interest museums, cinemas, and commercial bands. In a similar way, Emmison (2003:220) in a study of culture consumption in Australia notes, "Our analysis of the results for attendance at cultural venues suggests that two distinct factors are operative here. One set of venues, orchestral concerts, chamber music, ballet, musicals, opera and theatre, commonsensically can be grouped as 'high culture.' Another set, comprising rock concerts, movies, night clubs, pub music and theme parks, we regard as popular culture."

Most of the attention in the sociology of consumption focuses on the class fractions that are characterized by different combinations of these taste styles (popular, highbrow, and a third style that Van Eijck [2001] terms "folk"). Indeed, it is easy to show that these two contrasting forms of taste occupy distinct—but increasingly overlapping (Peterson 1997)—positions in sociode-

mographic space. Popular taste is more likely to be found among younger individuals who are either still in the process of acquiring educational credentials or who have not yet established themselves in a permanent occupation (or who are occupied in a sector of the artistic field that specializes in the production of popular culture), and among some segments of the working class and routine service sector (Bourdieu 1984:32–34). The highbrow aesthetic is more likely to be found among the older, more established upper-middle class, who engage in more difficult and demanding forms of aesthetic consumption with an eye toward using these objects to express more abstract values. The primary ideal commitment here is to approach culture as "cultivation"—what Bourdieu (1984:28) refers to as the "aesthetic disposition"—and the consumption of certain cultural goods as requiring effort, commitment, and a "distance from necessity" in order to be "properly" appreciated (Bourdieu 1984:28–30, Waterman 1998:56).

## TWO TYPES OF CONVERSION

Using the distinction between two types of culture consumption ("highbrow" versus "popular") and two types of network ties (strong and weak) it is possible to formulate a more specific model of the conversion of cultural into social capital. In the very same way that weak ties are construed as beneficial because they traverse wider portions of social space, I propose that consumption of popular cultural forms is beneficial because it provides the appropriate form of cultural capital that is more likely to flow through those types of (weaker) social connections. As DiMaggio (1987:444) notes, "popular culture provides the stuff of everyday sociability." That is, precisely because popular culture has a broader distribution in social space, it will thus tend to be associated with having connections that have a wider reach in that space. Conversely, the consumption of more demanding and arcane forms of culture—such as highbrow culture—because of its relatively stronger correlation with social position, should be more likely to be used to sustain local connections that do not reach far in social space and that are therefore more likely to be "strong" ties (Mark 1998a; McPherson, Smith-Lovin, and Cook 2001).

This differentiation between two different types of cultural capital is roughly in line with (although not strictly homologous to) Collins's (1988:360) distinction between *generalized* cultural capital and *particularized* cultural capital, and with Basil Bernstein's (1964) analogous differentiation between *restricted* and *elaborate* codes as the two primary forms through which cultural knowledge is produced and conveyed within and across status groups (see also Emmison 2003:217 on the distinction between inclusive and restricted "modes of cultural practice").[3] For Bernstein (1964:61), restricted codes are more likely to be used when "the form of the social relation is based upon some extensive set of closely shared identifications by the members." The elaborate code on the other hand is more likely to come into play when "role relations receive less support from shared expectations. The orientation of the speaker is based upon the expectation of psychological [or in our terms, *relational*] difference." In Collins's formulation, generalized cultural capital is primarily composed of "symbols which have come loose from any particular person and which simply convey a general sense of group membership [such as talking to friends about a popular sitcom or the local sports team]," which "can be widely used (as a topic of conversational exchange) even with strangers." Particularized cultural capital, in contrast, is that which is only "useful in keeping up a conversational ritual but only with certain people." Particularized cultural capital is much more important in Collins's view (1988:406) in solidifying networks of power and authority (Collins 1975),

Combining Bourdieu's, Bernstein's, and Collins' terms, we can say that popular culture has *generalized conversion value:* it may be

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[3] Bernstein's original typology of restricted and elaborate codes was initially developed as a way to contrast the flexible, styles of speech displayed by members of the affluent middle class with the more context-bound linguistic practices of the working class which would make my claim that highbrow culture is a restricted code appear to be the reverse of his original intent. Bergesen (1984:189–91), however, has shown that we can think of restricted codes in a more general way: the difficult styles of communication developed in exclusive artistic communities or scientific "thought collectives" can, and do function as a restricted code.

more easily converted into weak-tie connections with heterogeneous others, or used to nourish existing connections of this type, because of its relatively low correlation with position in sociodemographic space (Erickson 1996). Elite (highbrow) culture, on the other hand, has *restricted conversion value:* it should be more likely to sustain recurrent, strong-tie networks and function in the long-established-status boundary-maintaining role identified by analysts from Weber (1946:187) to Veblen ([1912] 1945) and more recently Bourdieu (1984) and Collins (1988), because of its tighter connection to social position. The reason for this has to do (in part) with (1) the normatively constrained matching of cultural content to the type of network relation (and ultimately the local situation [Mische and White 1998]), and (2) the added ritual and emotional outcomes that derive from sharing more "selective" forms of culture in an intimate (and thus more trusting) social context (Collins 1988; DiMaggio 1987). As DiMaggio's (1987:443) puts it, in contrast to the consumption of popular and mass media culture that simply serves to provide "fodder for least-common denominator talk . . . conversations about more arcane cultural forms—[such as] opera, [or] minimalist art . . . enable individuals to place one another and serves as rituals of greater intensity." In this way, social interaction involving the exchange of knowledge about relatively scarce cultural goods "bind[s] partners who can reciprocate, and identify[ies] as outsiders those who do not command the required codes," with "investors in specialized tastes" joining together in "the joy of sharing names."

Without losing sight of the ultimately heuristic nature of all economic metaphors (Bourdieu 1990b:92–93)—including that of capital—when applied to culturally mediated social interaction, it is possible to envision an informal social "transaction" between two individuals that makes use of highbrow culture as one that is accompanied by a high degree of asset specificity in Williamson's (1981) sense. It therefore makes sense to embed that social transaction under a governance structure that will ensure its successful completion; this case would require a "strong-tie" or a close, recurrent relationship that is charged with emotional value and associated cognitive salience (DiMaggio 1987; Erickson 1996; Granovetter

1973, Uzzi 1999). Social exchanges that make use of more popular cultural forms, on the other hand, are of a more general, less asset-specific nature, and thus do not need to be necessarily embedded in a strong-tie governance structure, but may occur under a looser, more "arms-length" type of social relationship (Uzzi 1999), one that would be consonant with the idea of a weak tie (Granovetter 1973). This will lead us to expect that generalized cultural tastes should increase the relative prevalence of these types of ties in an individual's social network.

## ARE CULTURAL TASTES ALWAYS AN EFFECT OF NETWORK TIES?

A crucial concern when examining the dynamic interplay between cultural taste and personal network characteristics—such as the number of social ties currently possessed by the individual—is the issue of reciprocal causation. Do cultural tastes produce larger networks or do larger networks drive tastes? Not surprisingly, most sociological research and theory that draw on network imagery (Erickson 1996; DiMaggio 1987; Mark 1998a) has assumed that the principal influence flows *from* networks *to* cultural tastes. Because of this widespread consensus, the empirical and theoretical propriety of this assumption has seldom been called into question. One reason why this has been the case might have to do with habitual patterns of inference drawn from entrenched metaphors (Lakoff and Johnson 1999), and theoretical commitments that construe networks as the infrastructure of society (and thus these networks are "hard" and casually efficient), cultural tastes as fleeting, and cultural content as simply objects that flow through these social pipes.

Recent research (i.e., Wellman et al. 1997; Burt 2000, 2002), however, has shown that networks are hardly stable, and that change and volatility in personal networks appear to be the rule rather than exception. Current dyadic contacts are constantly being deleted and new ones being formed throughout the adult life course. As Wellman and his collaborators (1997:47) conclude, "The most striking thing about our findings is how unstable intimacy is." This volatility is even more pronounced for weak ties or "bridging" connections (Burt 2000). Even personal networks studied in relatively delimited foci of interaction for comparatively

short periods of time (less than a year) experience large amounts of turnover and change (see the review in Burt 2000:5, Table 1).

There has been little empirical research on the dynamic stability of tastes through time. However, there is good reason to suppose that tastes are more stable than current network theory leads us to believe. For instance, most studies on the role that early-family and school experiences play in the development of cultural capital have shown the strong influence of arts participation, education, and after-school training during adolescence on adult tastes even after controlling for subsequent educational attainment (Kracman 1996). Bourdieu's (1984) model of the habitus as a system of *durable* dispositions acquired in the family environment assumes the same stability of tastes through time.[4] Smith (1995), for instance, shows that musical tastes are developed early in youth and are fairly stable across the life course, and Dumais (2002) shows evidence of stable dispositions toward certain types of culture already present in early adolescence.

Thus, it is not unreasonable to suppose that the received picture of a steady and temporally continuous social structure determining soft and malleable tastes might be a bit one-sided, if not empirically inadequate. Given the observationally established instability of social connections and the relative stability of tastes, an alternative model consistent with the idea of conversion of cultural into social capital can be proposed, one in which comparatively stable patterns of taste drive the cultural contents more likely to be deployed in interaction, which in their turn affect the composition of personal networks. While the notion of cultural tastes "having an effect" on network ties may seem relatively counterintuitive at first, this possibility should not be very surprising if these tastes are construed as "foci", or cultural structures that serve to organize social interaction around commonly shared knowledge and interests, such as fan clubs, reading groups, or internet hobby sites (Feld 1982).

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[4] For my purposes, it is not necessary to make any strong arguments about early childhood imprinting as Bourdieu was sometimes prone to make. I simply want to suggest that tastes may not be as volatile as network theorists sometimes make them out to be.

## CURRENT RESEARCH ON THE CONVERSION OF CULTURAL INTO SOCIAL CAPITAL

Previous research on the relationship between cultural and social capital provides preliminary evidence that a conversion process such as the one outlined earlier is plausible. Ostrower (1998:48), for instance, notes that high-status culture does not result in upper-class cohesion simply through the abstract, "imagined," commonality that results from shared knowledge and tastes related to highbrow culture, as in the popular account usually (but mistakenly) attributed to Bourdieu (1984), but more through its role in activating and facilitating the operation of organizational and network mechanisms that result in the production of events and meetings, as opportunities to form close contacts in those settings.

Elizabeth Long (2003) in her study of women's reading groups in Houston, Texas, finds a similar mutually constitutive dynamic between cultural taste and social connections. Consistent with the claim that connects the consumption of aesthetic products and sociability, she finds that reading group members "tend to press books into service *for the meanings that they transmit and the conversations they generate* (2003:73, 108, 144–48, italics added)." While previous affiliations (religious, educational, etc.) in formal institutions are clearly important in expediting the formation of some of the groups, most of the groups that Long observed emerged from more informal social networks located in the neighborhood or more loosely bound circles of acquaintances, as would be expected given the traditional model in which tastes are reinforced by previously existing network connections.

This is not, however, the only dynamic in operation. Long (2003:92) also finds that "previous social connections with other women are not necessary" for a person to become a member of the group (about 50 percent of reading group participants joined *without* previously having any friends in the group)—a clear case of previously existing taste dispositions *leading* to the formation of network relations and not the other way around. Nonetheless, if a group lasts several years, most of the social connections that are formed there tend to be transformed from initial acquaintances—weak ties—to more intimate close friendships (97 percent of the respon-

dents to Long's open-ended questionnaire reported having at least one close friend in the group, and 40 percent reported having more than two).

Erickson (1996), in her study of culture consumption, cultural knowledge, and network ties in Canadian security firms, provides evidence of the "elective affinity" between popular culture and weak ties. She notes that if a person familiar with highbrow culture were to use it in an interactional exchange with someone far away from him or her in social space, that is a person more likely to be a weak tie (who would be probabilistically unlikely to be familiar with such culture), this would either constitute a communicational failure (thus reducing the chances of maintaining that relationship) or it would simply be taken as a ritual show of domination. For the very different labor of *integrating* across distant social positions, popular culture is more useful. In settings where coordination is a more pressing issue than "distinction" (like the instrumental arena of profit-oriented workplaces), highbrow culture is rejected as a useless "waste of time." In Erickson's (1996:246) words, "[C]ulture useful in coordination is uncorrelated or almost uncorrelated with class, popular in every class, and rich enough to provide enjoyable conversation." Thus the differentiation between particularized and generalized cultural capital can be considered roughly analogous to Erickson's distinction between *coordination* culture and *domination* culture. Coordination culture is more useful for forming and sustaining bridging ties among socially distant positions (more likely to be weak) while domination culture is more useful—when used among people who have a mutual understanding of its "proper" deployment—for purposes of (upper) class cohesion (Ostrower 1998).[5]

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[5] We can also think of a third type of "differentiation" culture—that would be analogous in its functioning to domination culture—that is not "highbrow" but neither is it "popular" since it is used by the dominated classes to sustain intra-class cohesion (a restricted code in Bernstein's original sense). This is the type of cultural segmentation along horizontal lines initially noted by Peterson (1992) as being characteristic of "univore" taste.

## EMPIRICAL IMPLICATIONS

The model of conversion of cultural into social capital that I have outline so far, leads to a series of important empirical implications. First, we should expect that in contrast to the traditional network model that posits a one-way avenue of conversion of social into cultural capital, we should also expect to observe a reciprocal process of conversion of cultural into social capital. This implies that in comparison to those who are not involved in the consumption of arts-related culture, those individuals with a taste for either popular or highbrow culture should also have larger and wider spanning networks. Thus, in the very same way that tastes are seen as resulting from the network ties that transmit them, we should also find that large networks are a result of the possession of the wide variety of tastes that help to sustain them.

Furthermore, if the conversion model is on the right track, highbrow and popular culture should be subject to different conversion dynamics: we should expect that those individuals who are more likely to have mastery of the highbrow-culture restricted code should also be more likely to have personal networks rich in social ties of a more intimate nature (strong ties):

*Hypothesis 1:* Highbrow culture taste leads to a denser network of strong ties.

Popular culture taste, on the other hand, should be subject to a different conversion regime, whereby those individuals who have a greater degree of familiarity with these types of cultural goods being more likely to possess personal networks relatively richer in less intimate, "arms-length" ties, which, while not useful for purposes of intimacy and emotional support, provide access to nonredundant sources of information and other forms of instrumental resources (Lin 1999; Granovetter 1973):

*Hypothesis 2:* Popular culture taste leads to a denser network of weak ties.

## MEASURES

To test the foregoing hypotheses, I use data from the culture and network modules of the 2002 General Social Survey (GSS) (Davis, Smith, and Marsden 2002). The GSS is administered biannually by the National Opinion

Research Center (NORC) to a nationally representative sample of non-institutionalized, English-speaking American adults. The 2002 wave of the GSS contained a recurring module on participation in the arts (similar to ones fielded in 1993 and 1998), along with a new module related to social networks and social support. To my knowledge, this represents the first time that sociometric measures of network size and reach as well as measures of cultural taste have been present in a high-quality, representative dataset of the American population, which also contains relevant sociodemographic variables, thus representing a unique opportunity to evaluate empirically the adequacy of the conversion model outlined earlier.[6]

### Cultural Taste Indicators

Respondents were asked to report whether they had engaged in the following activities during the past year: (1) seen a movie in a theater, (2) gone to a live performance of popular music like rock, country, or rap, (3) attended a live performance of a nonmusical stage play, (4) watched a live ballet or dance performance, (5) heard a classical music or opera performance, (6) visited an art museum or gallery, and (7) read a novel, poem, or play. The variables are coded one if the respondent engaged in that activity in the past year and zero otherwise.

## MOKKEN SCALING

Because the cultural taste items are binary response indicators,[7] and due to my interest not so much in the acts of consumption themselves

but rather in how they may serve as pointers to an underlying trait or propensity to consume certain types of cultural goods, I resort to a method of unidimensional scaling developed in item response theory known as Mokken scaling (Mokken 1971).[8] Mokken scaling, a probabilistic generalization of the traditional Guttman scale, is appropriate when the analyst has at her disposal a set of binary items that are theoretically interpretable as measures of some underlying propensity or ability. The analog to the reliability coefficient (Cronbach's alpha) in Mokken scaling is Loevinger's $H$ coefficient. The $H$ coefficient can be used to characterize both each item and the entire scale, and is nothing but one minus the proportion of observed Guttman errors to the expected number of Guttman errors that would result by chance alone. A standard rule of thumb is that a "strong scale" is one where $H$ is equal to or larger than 0.5 (50 percent chance of a Guttman error). Just like standard factor analysis, Mokken scaling can be used to group items into sets each of which is seen as measuring a separate underlying "ability." The process begins with all items and begins grouping items until the $H$ coefficient of the first scale falls below 0.5, it then continues on to the second scale and so on until no more reliable scales can be created.[9]

should be plenty of people who attend events that they don't fancy." For our purposes, however, "taste" simply refers to the ability to "decode" a given aesthetic good—and thus being able to exploit that type of cultural knowledge in conversation—and not to a "liking" attitudinal orientation. After all, some of the liveliest interaction rituals revolve precisely around those aesthetic goods or performances that we did consume but that we did not like.

[8] This is relevant for the argument that I have made so far. Since taste is measured as the number of activities engaged in the past year, a reasonable objection related to the issue of casual order can be raised, since the number of activities in the past year cannot be realistically seen as preceding the number of close friends. If these measures are seen as indicators of an *underlying* taste propensity, then the casual order issue is averted, since it is reasonable to think of the development of tastes as prior to the formation of adult social networks.

[9] For this analysis I use the implementation of the Mokken procedure available in the "MSP" Stata routine written by Jean-Benoit Hardouin and publicly available at the Free IRT website (http://freeirt.free.fr/).

[6] For the 2002 GSS, in-person interviews were conducted with a national, full-probability sample of 2,787 English-speaking persons 18 years of age or over, with a response rate of 70 percent. Beginning with the 1994 General Social Survey, the GSS has consisted of a biennial, split-sample design. The number of respondents who completed both the network and the arts participation module consisted of a subsample of 1361 individuals (48.8 percent). The number of respondents who completed the sociometric questionnaire and the culture consumption questions and for whom I have data on the relevant sociodemographic factors is 1271.

[7] Using indicators of consumption as measures of taste raises the issue of what exactly is meant by "taste" in this context. As a reviewer noted, "[T]here

**Table 1.**    Mokken Scale Statistics for Taste Indicators, 2002 GSS

| | Highbrow Taste Scale | | | | |
| --- | --- | --- | --- | --- | --- |
| Item | Easiness P $(Xj = 1)$ | Observed Guttman Errors | Expected Guttman Errors | Loevinger Coefficient | z-statistic |
| Go to the Gallery or Museum | .41 | 136 | 288.86 | .53 | 14.44 ** |
| Read Novels, Poems, or Plays | .72 | 109 | 219.63 | .50 | 10.84 ** |
| Opera/Classical Music | .16 | 71 | 194.18 | .63 | 13.50 ** |
| Scale | | 158 | 351.33 | .55 | 15.80 ** |

| | Popular Taste Scale | | | | |
| --- | --- | --- | --- | --- | --- |
| Item | Easiness P $(Xj = 1)$ | Observed Guttman Errors | Expected Guttman Errors | Loevinger Coefficient | z-statistic |
| Go to the Movies | .73 | 62 | 158.22 | .61 | 11.82 ** |
| Go to a Popular Music Concert | .42 | 62 | 158.22 | .61 | 11.82 ** |
| Scale | | 62 | 158.22 | .61 | 11.82 ** |

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

The basic hypothesis is that, as shown in previous research on taste and consumption (Van Eijck 2001; Katz-Gerro 1999), these seven cultural activities can be partitioned into two broad classes, corresponding to "popular" and "highbrow" taste. Table 1 shows the results of the Mokken scale procedure. Across the columns are statistics corresponding to the "easiness" of the item (which is just the proportion of respondents who report having engaged in the activity), as well as the observed Guttman errors and the expected number of Guttman errors under the null hypothesis of complete item independence. The Loevinger coefficient is reported next as is the z-statistic corresponding to the test that the observed $H$ coefficient is zero. As expected, two "strong scales" emerge out of the original seven items. The first scale ($H = .55$) is the highbrow scale composed of gallery or museum attendance, literature consumption and opera or classical music concert attendance, all items traditionally associated with highbrow consumption, especially classical music (Bourdieu 1984:53), which happens to have the strongest "loading" ($H = .64$) on the scale (notice that attendance at dance events was determined to be redundant by the Mokken procedure, and I therefore exclude it from the final highbrow scale). Two items are grouped on a separate popular taste scale, movies and popular music consumption, also items unambiguously associated with the popular taste style

(Van Eijck 2001). These results support the idea that in the contemporary context, tastes group together around a restricted (highbrow) and a more generalized (popular) style of consumption. As measures of popular and highbrow taste, I create two additive scales from each of the items suggested by the Mokken procedure.

### NETWORK VARIABLES

The 2002 GSS contained a number of questions related to ego-network density. This set of items is intended to measure the total number of alters to which ego is connected. These measures of contact volume therefore can be taken as simple indices of network range as noted in Burt (1983:177).[10] From this set of questions I selected the following items for the analyses that follow.

### TOTAL NETWORK SIZE

This is a count of the total number of people that the respondent keeps in touch with at least once a year. The count represents an attempt to meas-

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[10] While this way of operationalizing ego-network range is simple, it is not necessarily unproblematic, because the connections among the people whom the respondent reports being connected to are not themselves measured (Burt 1983).

ure the complete number of existing social connections currently held by the individual, or "the nucleus of relations . . . which is 'thicker' around some individuals, 'thinner' around others" (Moreno 1937:213). As Borgatti and Everret (2006:2) note, in the context of measuring ego-networks, this measure of network "size" or "density" is in fact equivalent to the notion of degree centrality from the perspective of person-to-person data. Measures of network range can also be interpreted as indirectly tapping network diversity, insofar as the diversity of the network is thought to increase as the number of contacts to which each ego is connected increases (Burt 1983; Campbell, Marsden, and Hurlbert 1986:102; Erickson 1996). The item reads as follows: Not counting people at work or family at home, about how many other friends or relatives do you keep in contact with at least once a year?

## NUMBER OF STRONG TIES AND NUMBER OF WEAK TIES

After being asked for an estimate of their total number of connections, the respondents were then prompted to name how many of those people with whom they keep in contact at least once a year are really close friends: "Of these friends and relatives [that are contacted at least once a year], about how many would you say you feel really close to, that is, close enough to discuss personal or important problems with?" This number generator uses the "discuss personal or important problems with" prompt to extract meaningful and durable social relations, just like in standard name generators (Burt 1990).

I operationalize the number of strong ties as the response to this item. This is consistent with the conclusions reported in Marsden and Campbell (1984:497), who note that "closeness (the measure of the emotional intensity of a tie) is the best indicator of tie strength." Furthermore, the fact that this measure of the strong-tie network revolves around the exchange of resources (in this case advice or possible emotional support) is in line with Granovetter's original definition of the strength of a tie as "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding) and the reciprocal services which characterize the tie" (Granovetter

1973:1361). The number of weak ties is then calculated in a straightforward way as the number of friends in the total network minus the number of those friends that the respondent considers close enough to discuss important intimate matters with.

I use a third set of questions to construct an alternative measure of the number of strong ties in the personal network. Instead of relying on the "one-shot" item to gather the number of strong connections for each individual, this method entails asking the respondent about the number of close friendships that are located in different interaction foci (Feld 1982: 799), such as within the neighborhood, in voluntary associations outside of the neighborhood, or at work, in order to construct this multiple item measure of the number of strong ties. The general prompt for this set of items reads as follows:

> Now we would like to ask you about people you know, other than your family and relatives. The first question is about people at your workplace. Thinking about people at your workplace, how many of them are close friends of yours?
>
> How many other close friends do you have— apart from those at work, in your neighborhood, or among family members? Think, for instance, of friends at clubs, church, or the like.
>
> Thinking now of people who live near you—in your neighborhood or district, how many of these people are close friends of yours?

To obtain the total number of strong ties from this set of items I simply add the responses to these three questions.

## ANALYSIS AND RESULTS

### EXAMINING THE RELATIONSHIP BETWEEN CULTURE CONSUMPTION AND NETWORK SIZE

Is there a positive association between culture consumption and network size? Figure 1 shows a bar graph with the score on an overall culture consumption scale (obtained from adding the individual scores on the popular and highbrow culture consumption scales) in the horizontal axis, and the expected number of contacts (classified according to tie strength) in the vertical axis. The figure provides unqualified support for the connection between culture consumption and ego-network centrality (DiMaggio 1987): as the number of cultural activities that the respondent reports engaging in over the past year increases, the expected
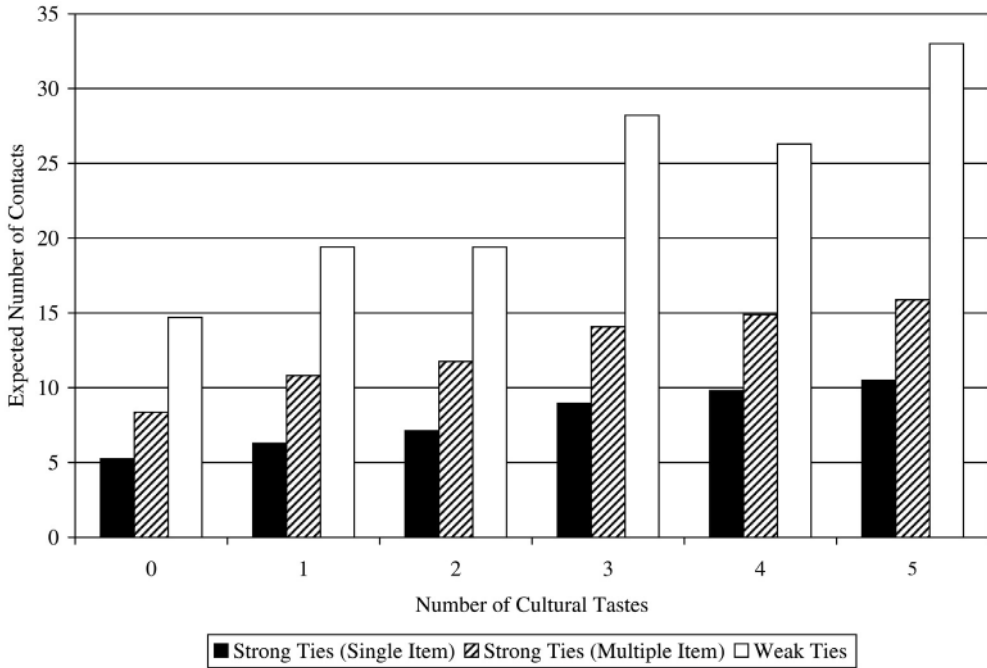
**Figure 1.** Expected Number of Contacts in the Strong-tie and Weak-tie Network by Individual Score on Culture
Consumption Scale, 2002 General Social Survey

number of contacts (both strong and weak ties) also increases.

When it comes to strong ties, we find a monotonic increase in the expected number of social contacts as the level of culture consumption expands, regardless of whether we index the number of more intimate contacts using the "one-shot" single item measure or the multiple item measure. Using the single item measure, a person that reports having consumed none of the cultural activities in the past month is expected to have only about 5.3 intimate friends. For persons who report having consumed up to two activities—the median for the entire sample—on the other hand, this number rises to 7.1 (an increase of about a third), and for persons who report having engaged in all activities, the expected number of close friends is 10.5, close to double the number of expected close ties for those who abstain from culture consumption according to the measures employed here.

A similar pattern of results can be observed when considering the number of close friends as measured by the multiple item measure: abstainers are expected to report about 8.4 close contacts, those who are at the median

level of culture consumption about 11.7, while true cultural omnivores are expected to have 15.9 friends in the various interaction foci (within the neighborhood, outside the neighborhood, and at work). The results are even more dramatic when considering the number of weak ties. Respondents who report having consumed no popular or arts-related performances are expected to have about 14.7 contacts that are not intimate. This figure increases to 19.4 for those respondents who report participating in at least two cultural activities, and it expands to 33 (an increase of 124 percent) for those who report participating in all activities.

These results are consistent with the traditional network model–inspired hypothesis that cultural tastes are transmitted through network connections, but they are also consistent with a conversion model that construes cultural tastes as embodied cultural capital that can be used to form and sustain larger and sparser social networks (DiMaggio 1987). In the following sections, I begin the task of evaluating which of these two hypotheses is most compatible with the data at hand.

## LOG-LINEAR MODELS OF THE ASSOCIATIONS AMONG CULTURE CONSUMPTION, NETWORK SIZE, AND CLASS BACKGROUND

Is it possible to think of cultural knowledge as capable of being "converted" into network relations, or is cultural taste simply an effect of network relations? Beyond the strictly theoretical observations offered earlier, a more pressing matter is whether we can empirically distinguish among these competing models of the process, or at the very least provide evidence that is compatible with either the most prevalent network-theory accounts or with the culture conversion imagery. Statistically, the issue boils down to determining which model of the process is compatible with the data. Because networks and cultural tastes in these data are measured simultaneously in a single cross-section, it is impossible to do this using the simple bivariate association such as that shown in Figure 1.

To tackle this issue, I turn to a straightforward yet relatively underused technique first described by Peter Blau (1955), aimed at "determining the dependent variable in certain correlations." This strategy, based on Lazarsfeld's (Kendall and Lazarsfeld 1950) influential scheme for determining spurious causation (see also Simon 1954), requires only the availability of a third variable whose casual priority vis-à-vis the two focal variables is not in question (in this respect Blau's strategy has much in common with more complex methods in econometrics such as instrumental variables regression). Blau's idea is relatively uncomplicated: given three variables, the casual status of one of which is not in question (usually because we are sure that this variable temporally precedes the other ones), we can use the casually prior third

variable to establish which of the causally ambiguous variables can be seen as the more plausible intervening variable. The intervening variable is then deemed as the most likely to be the causally prior of the two.

While Blau's original formulation relied on cross-tabular correlations, a natural extension of his analytic strategy is toward the hierarchical log-linear models for three-way tables, formulated by Goodman (1970). This was later on realized by Lever (1979), who showed how Blau's scheme could be conceptualized in terms of hierarchical log-linear models for three-way tables. I follow Lever's formulation here. The data to be analyzed are shown in Table 2 ($N = 927$). I use self-reported family income at age 16 as the common antecedent variable vis-à-vis network size and culture consumption, since it is reasonable to suppose that, as noted by Bourdieu ([1986] 2001), economic resources of the family of origin are converted into both social and cultural capital during the socialization process. This variable is recoded into three categories: (1) below average, (2) average, and (3) above average. As a measure of culture consumption, I use a cultural activity scale denoting the total number of activities (both popular and highbrow) that the respondent engaged in during the past year, recoded into three categories: (1) low (0–1 activities), (2) medium (2–3 activities), and (3) high (4–5 activities). In a similar way I create a three-category overall network size scale from the total number of contacts item: (1) small network size (0–10 contacts), (2) medium network size (11–25 contacts), and (3) large network size (26 contacts and above). The saturated log-linear model for the three-way association among family income at age 16 ($F$, with categories $i = 1,2,3$), current

**Table 2.**   Three–way Table Showing the Distribution of Respondent across Levels of Family Class Background, Current Levels of Culture Consumption, and Curent Network Size

| | Culture Consumption | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Small Network Size | | | Medium Network Size | | | Large Network Size | | |
| Family Income at Age 16 | Low | Medium | High | Low | Medium | High | Low | Medium | High |
| Below Average | 47 | 18 | 18 | 72 | 45 | 53 | 13 | 11 | 32 |
| Average | 38 | 21 | 19 | 89 | 78 | 88 | 24 | 43 | 44 |
| Above Average | 9 | 6 | 5 | 30 | 24 | 30 | 12 | 17 | 41 |
| Total | 94 | 45 | 42 | 191 | 147 | 171 | 49 | 71 | 117 |

network size (*N,* with categories $j = 1,2,3$), and current levels of culture consumption (*C,* with categories $k = 1,2,3$), can be written as

$$\log(m_{ijk} = \lambda + \lambda_i^F + \lambda_j^N + \lambda_k^C + \lambda_{ij}^{FN} + \\ \lambda_{ik}^{FC} + \lambda_{jk}^{NC} + \lambda_{ijk}^{FNC} \quad (1)$$

Where $m_{ijk}$ is the expected frequency on the *ijk*th cell of the table. While the saturated model is not very interesting, because it uses all the available degrees of freedom and reproduces the table counts exactly, more interesting models can be tested against the data by restricting some of the parameters in (1) to their null value.

As noted by Lever, and assuming that the three-way interaction parameter ($\lambda_{ijk}$) is zero, in the context of attempting to determine which of the two factors is more likely to be the intervening variable and which one is the more likely dependent variable, three models naturally follow (Lever 1979:84): (1) a model in which network size intervenes between the causally prior variable and cultural taste, which I term the "traditional network" model with ($\lambda_{ik} = 0| \lambda_{ij}, \lambda_{jk}$), (2) a model in which cultural taste intervenes between the causally prior variable and network size or the culture conversion model (CCM), with ($\lambda_{ij} = 0| \lambda_{ik}, \lambda_{jk}$), and (3) a spurious association model in which the relation between the two causally ambiguous variables, in the present case ego-network size and cultural taste, disappears once we allow the common antecedent to be associated with each one of them (i.e., with ($\lambda_{jk} = 0| \lambda_{ij}, \lambda_{ik}$). The graphical models (Whittaker 1990) corresponding to these three alternative formulations of the process—with variables as the nodes and two-way interactions as the edges—are shown in Figure 2.

Table 3 shows the fit statistics corresponding to various models of the relationship between family class background, culture consumption and network size. I present the model $G^2$ statistic (analogous to the *Chi²*) and the *BIC* statistic (Raftery 1995), which is an information-theoretic measure that takes parsimony into account when assessing model fit. For both statistics, smaller values indicate better fit. The *p*-value associated with the $G^2$ statistic pertains to how well the model reproduces the table counts. A *p*-value *above* 0.05 suggests an adequate level of fit. The first model is the simple model of independence, where all two-way and three-way associations are restricted to be zero. This
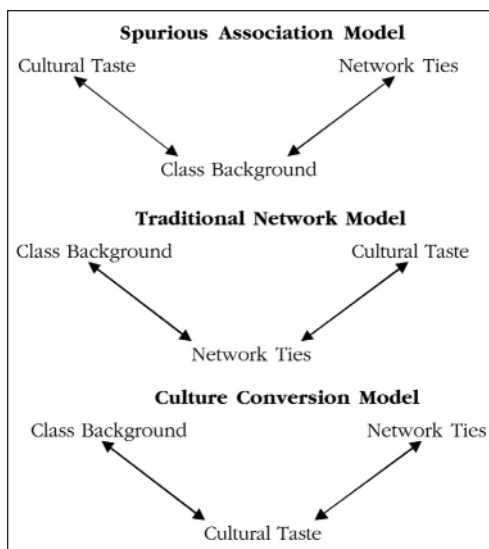


Figure 2.  Alternative graphical log-linear models of the relationship between family background cultural taste and network ties.

model uses seven degrees of freedom to fit all of the one-way marginals. As shown by the $G^2$ statistic (120.5, $p < 0.01$), this model fails to fit the table adequately suggesting, not surprisingly, that there is indeed and association between family background, culture consumption and network size.

Model 2 is the *traditional network model* in which the association (*FC)* between family background and culture consumption is set to zero, since network size is seen as intervening between the first two factors. This model is a significant improvement over the model of independence according to both the traditional $G^2$ (which is reduced by about 60 percent) and *BIC* criteria, using an additional eight degrees of freedom in comparison to the model of independence. As shown by the p-value corresponding to the $G^2$ statistic, however, this model fails to fit the table adequately ($p < 0.01$).

Model 3 is the *culture conversion model,* in which the family background/current network size association (*FN*) is set to zero, since cultural consumption is seen as intervening between these two factors. This model, using the same eight degrees of freedom above independence as the traditional network model, displays a significantly superior fit to the data over the traditional network model and an adequate overall fit to the data ($G^2 = 15.6$, $p = 0.21$),

**Table 3.**  Fit Statistics of Log–linear Models of the Relationship between Family Class Background, Culture Consumption, and Network Size

| Model | $G^2$ | $p$ | DF | BIC |
|---|---|---|---|---|
| 1. (F) (C) (N) | 120.496 | .000 | 20 | −16.143 |
| 2. (FN) (NC) | 47.906 | .000 | 12 | −34.078 |
| 3. (FC) (CN)[a] | 15.592 | .211 | 12 | −66.391 |
| 4. (FC) (FN) | 59.111 | .000 | 12 | −22.873 |
| 5. (FC) (FN) (CN) | 8.305 | .404 | 8 | −46.350 |

*Note:* F = Family income at age 16; C = Culture consumption; N = Network size.
[a] Preferred Model.

with the $G^2$ being reduced by more than 87 percent in comparison to the model of independence, and the *BIC* statistic displaying its most negative value for all the model in the table.

The *spurious association model* in contrast (Model 4) displays the worst fit of all the models—save for the model of independence—so far ($G^2 = 59.1$, $p < 0.01$), suggesting that, not surprisingly, the association between cultural taste and network range is not spurious (at least when family class background is concerned).

Finally, Model 5 is the "no three-way interaction" model in which all possible two-way associations are specified. This model fits the data very well ($G^2 = 8.3$, $p = 0.40$, 8 *df*), however, it uses four degrees of freedom beyond the preferred Model 2. A chi-square test shows that this is not a significant improvement in fit ($p = 0.19$, 4 *df*). Furthermore, Model 6 has a more positive *BIC* statistic than Model 3, suggesting that the gain in model fit does not justify the loss of parsimony. Thus, going by both the *BIC* and conventional model selection criteria, the culture conversion model appears to provide the best representation of the relationship among class background, culture consumption, and network size of all of the models considered in Table 3.

## LOG-LINEAR MODELS OF THE ASSOCIATION BETWEEN HIGHBROW AND POPULAR CONSUMPTION AND WEAK AND STRONG TIES

While the foregoing results provide support for the general proposition that higher levels of culture consumption are associated with ego-network centrality, the conversion model also makes the more specific prediction that different forms of taste will be selectively associated with different components of the individual's personal network when classified by average tie

strength (Hypotheses 1 and 2). As a first step toward verifying this claim, I fit a series of hierarchical log-linear models to the four-way table formed by cross-classifying levels of highbrow (*H*) and popular (*P*) culture consumption—in three categories: 0, 1, and 2+ activities—and levels of weak- (*W*) and strong- (*S)* tie network size also in three categories ($N = 1314$).[11] The table has a total of $3 \times 3 \times 3 \times 3 = 81$ cells. I restrict all three-way and four-way interaction effects to be zero. If Hypotheses 1 and 2 are in the right track, we should expect that a model that specifies an association between highbrow consumption and strong ties and popular consumption and weak ties—but which restricts the two-way interaction between popular consumption and strong ties and between highbrow consumption and weak ties to their null values—should provide the best representation of the data. Fit statistics for various models are shown in Table 4.

Model 1 is the null model of independence, in which I fit only the one-way marginals for each of the variables. Not surprisingly, this model can be easily rejected ($p < 0.01$), but can serve as a baseline for comparison for more substantively interesting models. In Model 2, I specify an interaction between the two forms of taste and the two types of network relations, but restrict all of the cultural taste/network size associations to zero. This model also fails to fit the data, suggesting that there is a link between the two forms of taste and the number of strong and weak ties reported.

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[11] For the number of strong ties these categories are small (0/3), medium (4/10), and large (10+). For the number of weak ties, the categories are divided in the same way as for total network size.

**Table 4.**    Fit Statistics of Log–linear Models of the Relationship between Popular and Highbrow Culture Consumption and the Number of Strong and Weak Ties

| Model | $G^2$ | $p$ | DF | BIC |
|---|---|---|---|---|
| 1. (H) (P) (W) (S) | 413.693 | .000 | 72 | –103.327 |
| 2. (HP) (WS) | 139.619 | .000 | 64 | –319.954 |
| 3. (HP) (WS) (HS) (PW)[a] | 60.693 | .311 | 56 | –341.434 |
| 4. (HP) (WS) (HS) | 78.738 | .053 | 60 | –352.111 |
| 5. (HP) (WS) (PW) | 116.353 | .000 | 60 | –314.497 |
| 6. (HP) (WS) (HS) (PW) (HW) | 53.048 | .434 | 52 | –320.355 |
| 7. (HP) (WS) (HS) (PW) (PS) | 57.451 | .280 | 52 | –315.952 |

*Note:* H = Highbrow consumption; P = Popular consumption; W = Weak ties; S = Strong ties.
[a] Preferred Model.

In Model 3, I specify the cultural taste/network size interaction effects in a manner consistent with Hypotheses 1 and 2. This model fits the data fairly well according to the traditional deviance ($G^2$ = 60.7, 56 *df, p* = 0.31) and BIC criteria, suggesting that the notion of a selective association between popular taste and weak ties and between highbrow taste and strong ties in line with that suggested by the conversion model, is consistent with the data at hand.

Models 4–5, show what happens when we restrict the popular taste/weak ties (*PW*) association and the highbrow taste/strong tie association to zero, respectively. Model 4 says that highbrow taste is associated with strong ties, but that there is no association between popular taste and weak ties. This model uses four degrees of freedom less than the preferred Model 3, but exhibits a statistically significant deterioration in model fit (*Chi*$^2$ = 18.0, *p* < 0.01)—although it would be the preferred judging solely by the *BIC* criterion—suggesting that popular taste is indeed associated with the number of weak ties going by conventional statistical criteria. Looking at Model 5, we can see that even stronger loss of fit is obtained when we restrict the (*HS)* association to be zero. A model that says that popular taste is associated with weak ties but that there is no association between highbrow taste and strong ties does not fit the data very well (*p* < 0.01), implying that the connection between strong ties and highbrow taste is stronger than the association between popular taste and weak ties in these data. Nevertheless, since neither Model 4 nor Model 5 fit as well as Model 3, we can safely conclude that the two forms of cultural taste are associated with the two types of network relations in a manner consistent with Hypotheses 1 and 2.

Models 5 and 6 add supplementary interaction effects between popular taste and strong ties (*PS*) and highbrow taste and weak ties (*HS*) to the specification corresponding to the preferred model 3. In neither case does the addition of these additional associations between taste and network size (which would contradict Hypotheses 1 and 2) result in significant improvements in model fit. Model 7, which says that in addition to the effects predicted by Hypotheses 1 and 2, we should also observe an association between highbrow taste and weak ties, does not result in a statistically significant improvement in fit when compared to Model 3 (*Chi*$^2$ = 7.7, *p* = 0.14, 4 *df)*, thus weak ties appear to be associated with popular and *not* highbrow taste. Model 8, which says that there should be an association between popular taste and strong ties in addition to the effects specified in Model 3, shows an even more substantial failure to produce additional explanatory power (*Chi*$^2$ = 3.2, *p* = 0.71, 4 *df)*, indicating that there is no statistically significant interaction between these last two factors.

In all, it is safe to conclude that Model 3 provides the best representation of the data if we go by a combination of both the deviance and *BIC* criteria. This suggests that Hypotheses 1 and 2 are on the right track: taste for popular culture appears to be selectively associated with an increasing number of weak ties, while taste for highbrow culture is selectively associated with an increasing number of strong ties.

### INSTRUMENTAL VARIABLES ANALYSIS

While the results shown in Tables 3 and 4 represent encouraging evidence consistent with the conversion model, they are primarily intend-

ed to show the plausibility of construing taste as a predictor of the composition and size of personal networks and to show that the pattern of effects predicted by Hypotheses 1 and 2 are consistent with the data at hand, rather than to stand as conclusive verification of the conversion hypothesis. After all, it is possible that even if cultural taste can be seen as mediating the relationship between a given set of antecedent variables and current network size, this mediating effect itself may be a by-product of other more "fundamental" social factors. Thus other sources of spuriousness cannot be ruled out. For instance it is possible that current *SES* is the key intervening variable here and that once we control for that, the effect of taste on network size disappears, since *SES* has been shown to affect both network size (Lin 1999; Lin and Dumin 1986) and cultural taste (Bourdieu 1984; DiMaggio 1987). Therefore the only way to establish the conversion effect more securely—and to test hypotheses that imply contrasting effects of both forms of cultural taste on network size—is in a multivariate framework where these confounding factors can be held constant, and where any reciprocal effects going from networks to cultural taste can be partialed out.

Because the natural coding of most of the network size variables is a count, regression models for the modeling of count data such as Poisson models or generalizations thereof such as negative binomial regression (Barron 1992) are a natural option.[12] Simply regressing the cultural taste indicators against measures of network range would be problematic, however, because the cultural taste measures may be "endogenous" vis-à-vis network size. That is if, as suggested by previous research (Erickson 1996; Mark 1998a; DiMaggio 1987), network range has a reciprocal causal effect on cultural taste, then using cultural taste to predict network size would lead to biased estimates of the effect of cultural taste, because the taste indicators would have a non-zero correlation with the error term of the regression equation.

One popular econometric technique to get unbiased coefficient estimates in this case is instrumental variables (IV) regression (Winship and Morgan 1999:680–87). IV regression is a two-stage procedure that attempts to remedy the bias caused by reciprocal causation. This is done by initially selecting a set of $k$ variables—referred to as "instruments"—which are correlated with the endogenous covariates. In this first stage, the endogenous covariates are regressed against the instruments and all other exogenous variables to be included in the second stage using ordinary least squares.[13] We can then use the predicted values (the systematic part) from this first stage regression and "plug" them into the regression equation of interest in the second stage. Because the part of the endogenous regressors that was reciprocally affected by network size is now left behind in the error term of the first-stage regression, the coefficients associated with each of the instrumented variables should produce a consistent estimate of the "true" effect—if any—that goes from the right-hand side variables to the left-hand side outcome.

For the IV technique to yield unbiased estimates of the effect of the endogenous regressors on the outcome, however, the instruments must satisfy the following three conditions: (1) they should have a relatively strong correlation with the taste measures, (2) they should be causally prior vis-à-vis the dependent variables, and (3) they should affect only current network size via their effect on taste. While the first assump-

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[12] Most empirical degree distributions are highly skewed to the right, following a "power law" distribution (Watts 2004), with a significant minority of actors displaying a number of connections that is so large as to be "off the scale," or scale-free. Thus, count over-dispersion is usually the rule. Graphical inspection of the degree distribution shows that the GSS estimates of the degree distributions for various portions of the personal network in the American population is no exception to this rule. All three distributions show extreme right-skewness, as have been shown to obtain for a variety of other empirical degree distributions.

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[13] In the following analyses, the excluded instrument vector includes the following variables: a vector of dummy variables indexing the respondent's region of residence at age 16 (foreign, Northeast, Midwest, Mountain, and West, with South as the reference category), five dummy variables indexing the type of locale (farm, suburban, urban, etc.), and a vector of dummy variables indexing whether the respondent, her parents, and her grandparents were born in the United States.

**Table 5.**  Descriptive Statistics for the Variables Used in the Analysis

| Variable | Obs | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Education | 1364 | 13.28 | 3.09 | 0 | 20 |
| Occupational Earnings | 1333 | −1.11 | 1.05 | −2.97 | 1.61 |
| Age | 1359 | 46.52 | 17.54 | 18 | 89 |
| Gender (Female = 1) | 1365 | .52 | — | 0 | 1 |
| Race (Black = 1) | 1365 | .15 | — | 0 | 1 |
| Marital Status (Married = 1) | 1365 | .44 | — | 0 | 1 |
| Number of Children | 1365 | 1.83 | 1.74 | 0 | 8 |
| City Size (in Thousands) | 1365 | 394.94 | 1317.53 | 0 | 7323 |
| Geographic Mobility | 1365 | 1.90 | .87 | 1 | 3 |
| Northeast | 1365 | .22 | — | 0 | 1 |
| Midwest | 1365 | .25 | — | 0 | 1 |
| South | 1365 | .34 | — | 0 | 1 |
| Mountain | 1365 | .06 | — | 0 | 1 |
| West | 1365 | .13 | — | 0 | 1 |
| Highbrow Scale | 1365 | 1.30 | — | 0 | 3 |
| Popular Scale | 1365 | 1.15 | .76 | 0 | 2 |
| Number of Strong Ties (Single Item) | 1314 | 8.03 | 10.50 | 0 | 75 |
| Number of Strong Ties (Multiple Item) | 1142 | 12.85 | 13.75 | 0 | 100 |
| Number of Weak Ties | 1314 | 23.43 | 35.43 | 0 | 200[a] |

[a] Values above 200 truncated at 200.

tion can be corroborated using simple first-stage significance tests, and the second assumption is fairly plausible given the nature of the instruments (I only selected variables that are temporally prior to the current size of the respondent's network), it is not possible to test the third assumption directly. To guard against possible bias caused by this last factor and to eliminate the possibility of a spurious effect of cultural taste on network size, I include the following vector of control variables: (1) years of education; (2) SES measure based on occupational earnings (Hauser and Warren 1997), since both the highly educated and those in high-earning occupations have been shown to have larger networks (Lin and Dumin 1986); (3) years of age and its square, as network size has been shown to steadily decline with age; (4) a dummy variable for gender (female equals one), since researchers have found systematic differences in the network size of women in comparison to men (Moore 1990); (5) a dummy variable for race (black equals one), since blacks have been shown to have smaller networks than whites (Marsden 1987); (6) marital status and number of children (Munch, McPherson, and Smith-Lovin 1997), (7) geographic mobility since the age of 16, and (8) current region of res-

idence. Descriptive statistics for all of the variables used in the analysis are shown in Table 5.

## CULTURAL TASTE EFFECTS ON STRONG TIES

Do the two different forms of cultural taste have different effects on the strong and weak-tie components of the personal network? To answer this question, in Table 6 I present a series of instrumental variables Poisson models, in which I regress the strong- and weak-tie network density measures against the instrumented versions of the taste measures, which can now be treated as any "normal" exogenous variable in the regression model.[14] For each portion of the network, I first present a model showing the effect of sociodemographic covariates and then a model that includes the cultural taste predictors.

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[14] I estimate the instrumental variables Poisson regression model using the QVF package written by Hardin, Schmiediche, and Carroll (2003) in version 9.2 of the Stata Package (Statacorp 2005). Coefficient estimates are obtained from a Poisson family generalized linear model (GLM) estimated via the method of iteratively re-weighted least squares (IRLS) with a log link function.

**Table 6.** Instrumental Variable Poisson Regression Estimates of the Effects of Highbrow and Popular Culture Consumption on Network Size, 2002 GSS (Murphy-Topel Corrected Standard Errors in Parentheses)

| | Strong Ties (Single Item) | | Strong Ties (Multiple Item) | | Weak Ties | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Years of Education | .0407*** | −.0041 | .0608*** | .0156** | .0593*** | .0580*** |
| | (9.89) | (−.57) | (17.61) | (2.50) | (24.37) | (13.63) |
| Occupational Earnings | .0411*** | .0059 | −.0265*** | −.0533*** | .1294*** | .1222*** |
| | (3.66) | (.46) | (−2.75) | (−4.81) | (19.29) | (16.12) |
| Years of Age | −.0134*** | −.0154*** | −.0177*** | −.0188*** | −.0090*** | −.0071*** |
| | (−3.85) | (−4.31) | (−5.94) | (−6.15) | (−4.24) | (−3.24) |
| Age Square/100 | .0136*** | .0145*** | .0194*** | .0149*** | .0082*** | .0101*** |
| | (4.07) | (4.21) | (6.74) | (4.86) | (4.04) | (4.79) |
| Gender (Female = 1) | .1697*** | .0438 | −.0553*** | −.2120*** | .0757*** | .0993*** |
| | (8.01) | (1.57) | (−3.07) | (−8.80) | (6.13) | (6.03) |
| Race (Black = 1) | −.3405*** | −.2837*** | −.0941*** | −.0811*** | −.2414*** | −.2288*** |
| | (−9.27) | (−7.47) | (−3.22) | (−2.64) | (−11.27) | (−10.31) |
| Marital Status | .0366* | .0331 | .1381*** | .1212*** | .2626*** | .2780*** |
| | (1.66) | (1.43) | (7.35) | (6.07) | (20.11) | (20.32) |
| Number of Children | .0296*** | .0386*** | .0459*** | .0581*** | .0288*** | .0298*** |
| | (4.30) | (5.48) | (7.93) | (9.57) | (6.88) | (6.99) |
| Size of Place (Logged) | −.0119*** | −.0279*** | −.0105*** | −.0242*** | −.0035 | −.0055* |
| | (−2.81) | (−5.71) | (−2.94) | (−5.77) | (−1.40) | (−1.91) |
| Geographic Mobility | .0108 | −.0215 | −.0549*** | −.0981*** | −.0699*** | −.0609*** |
| | (.88) | (−1.60) | (−5.20) | (−8.50) | (−9.59) | (−7.64) |
| Northeast | .0048 | .0148 | −.0541* | −.0345 | .0391* | .0292 |
| | (.13) | (.41) | (−1.78) | (−1.10) | (1.84) | (1.36) |
| Midwest | .1269*** | .0990*** | .0096 | −.0017 | .1476*** | .1303*** |
| | (3.76) | (2.84) | (.33) | (−.06) | (7.26) | (6.21) |
| South | −.0562* | −.0196 | .0265 | .0491* | .1330*** | .1237*** |
| | (−1.68) | (−.58) | (.94) | (1.70) | (6.76) | (6.19) |
| Mountain | −.0728 | −.0951* | −.0174 | −.0249 | −.2334*** | −.2479*** |
| | (−1.44) | (−1.86) | (−.42) | (−.59) | (−7.01) | (−7.39) |
| Highbrow Culture Scale | — | .5527*** | — | .6514*** | — | −.1246** |
| | | (6.61) | | (9.59) | | (−2.46) |

**Table 6.**  (Continued)

| | Strong Ties (Single Item) | | Strong Ties (Multiple Item) | | Weak Ties | |
| --- | --- | --- | --- | --- | --- | --- |
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| Popular Culture Scale | — | .0095 | — | −.1911** | — | .2237*** |
| | | (.10) | | (−2.43) | | (3.75) |
| Sargan Statistic | — | 21.31 | — | 16.02 | — | 14.92 |
| $p$-value | — | .167 | — | .451 | — | .531 |
| Anderson L.R. Statistic | — | 27.856 | — | 29.351 | — | 27.856 |
| $p$-value | — | .047 | — | .031 | — | .047 |
| Model Deviance | 10252.3 | 10191.3 | 11235.0 | 11136.4 | 40550.5 | 40536.1 |
| Pseudo R-squared | 0.0999 | 0.1053 | 0.1228 | 0.1305 | 0.1476 | 0.1479 |
| Akaike Inf. Criterion | 7858.32 | 7801.31 | 9147.02 | 9052.38 | 38156.46 | 38146 |
| N | 1212 | 1212 | 1059 | 1059 | 1212 | 1212 |

* $p < .1$; ** $p < .05$; *** $p < .01$ (two-tailed tests)

For the IV regression models, in addition to the model deviance statistic, the table includes the Anderson canonical correlation likelihood ratio statistic, which is a chi-square test of the predictive power of the excluded instruments in the first-stage regression (a statistically significant value indicates that the instruments do serve partially to predict the cultural taste measures net of the other exogenous covariates). I also show the Sargan-Hansen "C" statistic (Hayashi 2000:227–28), which is a specification test with the null hypothesis being that the excluded instruments are justifiably uncorrelated with the regression disturbances.[15] Here a $p$-value above 0.05 is taken as evidence that the instruments are valid. For all three IV regression models, the Anderson statistics show that the instruments do a good job of predicting both popular and highbrow consumption even after holding constant the full set of controls ($p < 0.05$), and the $C$ statistic shows that there is no problem arising from having incorrectly excluded any of the instruments used ($p > 0.05$).[16]

Models 1 and 2 have the single item measure of the number of strong ties as the dependent variable. Model 1 shows a baseline model of the effect of different sociodemographic indicators on the expected number of strong ties. I find that, consistent with previous research, highly educated individuals in prestigious occupations are more likely to have a denser personal network of strong ties. Age has the expected negative effect, which increases at a decreasing rate for older individuals, as shown by the positive squared term. I find that blacks tend to have smaller networks overall and that women are on

[15] This statistic was obtained from OLS IV regression models identical to the ones shown in the table. The pseudo r-squared values are proportion-reduction-in-error measures obtained using the null model with no independent variables as the baseline for comparison.

[16] The standard errors of a two-stage Poisson regression model are incorrect as a result of bias generated by the inclusion of the predicted values generated in the first stage and imputed in the second stage, since these are measured with sampling error. Correct hypothesis tests can be obtained using a robust Murphy-Topel technique (Hardin 2002; Murphy and Topel 1985). Thus the standard errors reported in Table 3 are based on the Murphy-Topel estimator of the variance.

average more likely to report having more close friends than men. Being married and having children increases the size of the strong-tie network, while living in a large city decreases it. Model 2 shows what happens once we add the cultural taste predictors. In accordance with Hypothesis 1, highbrow culture consumption has a strong and statistically significant effect on the number of contacts who are considered close enough to discuss important matters with. I find that popular culture consumption also has positive impact on this outcome, although the coefficient estimate is much smaller and not statistically significant. More importantly, notice what happens to the size of the education and SES coefficients once we hold constant the effect of culture consumption. Both are decreased substantially, and neither reaches statistical significance in Model 2. This suggests that culture consumption is the *intervening mechanism* that explains the often-noted association between high status and having large networks. This is consistent with conversion model's contention (and the constructural model's less specific prediction) that the primary purpose of arts and popular culture consumption for high-status individuals is to sustain large and sparse social networks.

Models 3 and 4 display the same specification as Models 1 and 2, this time with the multiple-item measure of the number of strong ties as the dependent variable. The coefficient estimates for the baseline model show the same pattern of effects as those obtained in Model 1, except for occupational earnings, which has a negative effect on the number of strong ties as measured by this item (possibly because the usage of multiple items does a better job of measuring really strong ties and because the type of network "constraint" associated with having a dense network of close relationships has been shown to be negatively associated with SES), this model also indicates a negative effect of geographic mobility, suggesting that the formation of long-lasting intimate connections is hampered for peripatetic individuals. The results shown in Model 4 offer even stronger support for the contention that highbrow culture consumption leads to a higher likelihood of forming strong connections in comparison to popular culture. While the coefficient estimate for popular culture in this model is negative, I find that highbrow culture continues to have a strong

and statistically significant effect on the number of strong ties. Furthermore just like in Model 2, the effects of education are attenuated once we control for culture consumption, suggesting that the linkage between education and large network is made possible by the enabling effect of education on culture consumption (Bourdieu 1984; DiMaggio 1987).

## CULTURAL TASTE EFFECTS ON WEAK TIES

Are the effects of highbrow and popular culture consumption different when the outcome is the number of weak ties? Model 6 shows that this is indeed the case, replicating the log-linear model results shown in Table 4. In model 5, I show the baseline effects of the control variables on the number of weak ties. Consistent with Lin's (2001, 2000, 1999, 1990; Lin and Dumin 1986; Lin, Lin, Ensel and Vaughn 1981, Vaughn, and Ensel 1981) theory of status attainment and social capital, I find that individuals who occupy more prestigious and powerful positions in the social structure—as measured by educational attainment and occupational earnings— are also more likely to report having more contacts who are not of an intimate nature (weak ties), with the positive effects of both occupational earnings and education being much more substantial in the case of weak ties than in that of strong ties. Model 6 shows the effect of culture consumption on weak ties. I find, consistent with Hypothesis 2, that in contrast to its strong positive effects on strong ties, highbrow culture consumption has a weak negative effect on the number of weak ties. Popular culture consumption, on other hand, has a significantly stronger positive effect, consistent with the claim codified in Hypothesis 2, that popular culture is more useful for the maintenance of more fleeting, "arm's-length" connections to others.

### *SUMMARY*

Three conclusions emerge from these analyses: (1) net of sociodemographic factors, highbrow taste is more likely to be converted into a denser network of strong ties, and popular taste leads to an increasing number of weak ties; (2) the net effect of highbrow (popular) taste on the size of the portion of the network composed of

less-intimate (more-intimate) contacts is large-ly null, as would be expected if this type of cul-tural competence were not useful for the sustenance of these types of network connec-tions; and (3) the positive effect of institution-alized forms of cultural capital (such as education) and of economic capital (as measured by occupational earnings) on the size of the personal networks is largely mediated through embodied forms of cultural capital displayed in the form of cultural taste.

Substantively identical results are obtained using alternative methods of estimating causal effects. A series of matching analyses (Winship and Morgan 1999)—available as an online *ASR* supplement available at: http://www2. asanet.org/journals/asr/2006/toc05X.html/ 05XsupX.pdf/ —reproduce the same set of results as those shown in Table 6, showing that popular culture consumer status selectively (and positively) affects the number of weak ties but not the number of strong ties, and that highbrow consumer status has a positive impact on the number of strong ties but not on the number of weak ties. The matching analysis, in contrast to the IV analysis, does not reveal a negative effect of popular and highbrow consumption on strong and weak ties, respectively, but simply a null effect.

## DISCUSSION

The basic thrust of the results reported in this article can be summarized in a succinct way: individual tastes for different types of culture help to create and sustain different types of net-work relations. In a general manner, this find-ing supports the basic proposition that the primary use of the knowledge gained through cultural tastes—especially those connected with the arts and sports (and other cultural pur-suits)—are *social* (DiMaggio 1987). Thus, the consumption of widely available cultural goods serves as one of the primary ways in which individuals become connected and integrated into the social structure. Individuals who are not involved in culture consumption are therefore more likely to be disconnected from others and forgo all of the benefits that come from network relations and that have been glossed under the banner of social capital. In this way the often-noted but seldom-explained association between high socioeconomic status and personal net-

work density can be explained. Insofar as high-status occupants are also the more avid culture consumers, they will also be the ones capable of sustaining larger social networks.

An important implication of the findings reported here is that the likelihood that certain forms of cultural knowledge will serve as either "fences or bridges" depends on their appeal and ease of incorporation. Cultural pursuits that have a steep learning curve or that require exten-sive training and experience to be consumed (i.e., the "acquired tastes" of the dominant class-es, the "niche" tastes developed around newly emerging technologies, or a strong interest in nineteenth-century social theory) are more like-ly to be used as fences, simply because people are likely to exploit that type of knowledge to sustain network relations already imbued with multiple meanings and emotional salience (mul-tiplex ties), in relatively exclusionary interaction foci. Popular cultural forms, on the other hand, connect individuals to more distant segments of the social structure. In this way the consump-tion of widely available cultural forms serves as the "default" form of portable cultural knowl-edge that helps to keep a minimal level of inte-gration even in large and complex social structures such as those characteristic of con-temporary postindustrial societies (Watts 2004).

This formulation is consistent with portions of network theory that draw on the notion of *balance* (Davis 1963; Heider 1958). Balance theorists argue that it is precisely local networks characterized by an abundance of more inti-mate ties that are more likely to "close in on themselves" through local clustering. The rea-son for this—as famously noted by Granovetter (1973) and notably elaborated in Burt (1992)—is rooted in the fact that if a given person has a strong connection with two others by way of strong ties, then it is much more likely that the two others will also be connected to each other (producing triadic closure) than if the original connections took the form of a weak tie. This network mechanism, coupled with the idea of restricted conversion, can be used to explain why some cultural forms are more likely than others to sustain closed-in status groups (Weber 1968:428–29), while other forms result in inte-gration across distant positions (Erickson 1996).

Thus, if a particular form of culture leads to the formation and the preservation of a weak connection, then it is likely that, if another social

connection is formed on the basis of the same cultural knowledge, the two alters will not be connected to each other. Because an analogous pair of social connections that are sustained by a more restricted form of cultural capital are more likely to be strong ties, we should also expect the two alters to have a higher probability of being connected themselves, leading to the classical case of triadic closure. The same process can be formulated in terms of Feld's (1982: 1019, 1022) "focus theory," with some cultural forms (such as highbrow culture) serving as "constraining" interaction foci and thus more likely to lead to transitivity and clustering, and others, such as popular culture, playing the role of a relatively less constraining foci. In this way we can begin to link the properties of cultural forms with the types of social relations (and thus local network structure) that they help foster.

What implications do the foregoing results carry for previous studies that have attempted to connect cultural and social capital? The answer depends on what counts as social capital. If social capital is defined as social connections that connect individuals with other individuals or groups relatively distant in social space, as most interpreters of Granovetter's (1973) classic article do (i.e., Burt 1992, 2005; Lin 2001, 1999), then it is not necessarily diversity that cuts across the highbrow-versus-popular boundary, and that carries with it the social benefits of having a network rich in weak ties, but it is consumption diversity of *popular* cultural forms that will bring with it those benefits. In other words, consumption of highbrow cultural forms is not likely to provide the individual with the type of cultural capital that can be used to create bridging connections. In a context such as that characteristic of the United States, where the industrialization of cultural goods has produced a dominant popular culture industry (DiMaggio 1991a), popular culture (i.e., sports, movies, music, etc.) becomes the type of "safe" form of cultural knowledge that can be used to sustain connections with contacts that are far away in social space, thus providing the individual with the benefits that accompany this type of social capital (Lin 1999).

If social capital is defined as social ties useful for classic purposes of cohesion, bonding and group closure (Bourdieu 1984; Coleman 1990; Putnam 2000; Portes 1998; Weber

1971:43–46), then consumption of cultural forms with more restricted audiences appears to provide the cultural resources most appropriate for those purposes. Notice that from an ecological viewpoint (Mark 1998a, 2003; McPherson 1983; Carroll 1985), highbrow culture is simply an example of a *specialist* form, and its effect on relational outcomes should be due to this latter property and not to its higher status value; "lowbrow" and "middlebrow" cultural forms that do not enjoy widespread appeal (i.e., "grassroots" music, sci-fi comics) would be equally likely to be associated with close-knit social circles where group boundaries are most likely to be clearly defined and identity discourses are likely to be linked to distinctive forms of culture consumption and taste (Bryson 1997; Sonnett 2004; Peterson 1997). From this point of view, it is not the relative status of a form but its *niche-width* (Carroll 1985)—or relative correlation with social position (Erickson 1996)—that connects it to more intimate social ties.

Yet if we move beyond the bridging-versus-bonding dichotomy and define social capital in Uzzi's terms as "network complementarity" (Uzzi 1999:491), or a balanced and "optimal" mix of both "arms-length" (weak) and "embedded" (strong) ties, then the cultural omnivores or those who combine both the "pop" and "artistic" styles of cultural consumption (Van Eijck 2001) are in the most advantageous position, since they are able to convert their complementary cultural resources into a network rich in both types of social capital. Thus, Peterson's (1992:254) reverse pyramidal image of the taste structure of modern societies—with one form of broad elite (omnivore) taste at the top and a loose set of more narrow, horizontally bounded and exclusionary tastes at the bottom—is matched by an analogous inverse distribution of the diversity of social connections, with high-status individuals having access to both bridging and bonding ties that traverse large distances in both physical and social space, and low-status individuals being embedded in more restrictive networks composed of a few strong ties to kin and neighbors (Marsden 1987).

Thus at the top of the hierarchy we find those who posses a higher degree of cultural mobility in Emmison's (2003:213) terms, or a greater capacity to "display . . . cultural competence in a plurality of domains with concomitant social

rewards accruing to those demonstrating these capacities." While in the more dominated regions of social space we find cultural univores (Bryson 1997), who restrict their consumption to a small set of less widespread cultural forms and who are bound to remain within more local, strong-tie cliques, explaining the negative association between socioeconomic status and network constraint. Cultural omnivorousness in this way can be translated into network advantages based on brokerage and "structural autonomy" (Burt 1992), by providing the individual the opportunity to link segments of the population (i.e. exclusive highbrow and popular culture consumers) that are not very likely to be connected to one another (Granovetter 2002).

The findings reported here suggest an important amendment to the Carley-Mark constructural model of how shared cultural knowledge leads to a higher probability of interaction. In the usual formulation of the constructural model, when two individuals come together to interact, the probability that any "piece" of knowledge is exchanged is the same for all of the cultural facts, regardless of their distribution in the population. According to the conversion model, however, when two individuals come together to interact, the probability that a "popular" cultural form (one that is already shared by almost everyone in the social structure) will be selected as the "topic" of the exchange should be *inversely proportional to the strength of the tie between the two individuals* (which is usually conceptualized as the proportion of facts that are shared by the dyad). In a similar way, the probability that an unpopular cultural form is selected should be directly proportional to the strength of the tie.

This added assumption should have important implications for the dynamic distribution of the cultural forms—and thus the structure of relations—across the population, including a possible lengthening of the time to which a particular group or population is integrated (Carley 1991). Whether the conversion model implies a lengthening or shortening of group and social integration, however, should be dependent on the likelihood that popular forms are likely to be shared among strongly connected dyads. If this last probability is high, we should expect a shorter time to integration within the group. Another possibility is that there could be a heightening of the probability of some subsets of individuals (because they are induced to share "unpopular" facts among themselves) acquiring their own *idioculture* (Fine 1979), thus developing a chronic inability to interact beyond their immediate group. Future research should concern itself with addressing these implications in a more rigorous way (by way of computer simulations, for instance).

The conversion model formulated in this article also allows us to add some nuance to the recent attempt to explain the incidence of tastes for different types of culture from a structural-selectionist (SS) viewpoint (Mark 1998a, 2003; McPherson 2004). Structural selectionism is a hybrid of network theory and ecological theory, in which individuals and cultural form are seen as participating in a dual ecology (Mark 2003), with individuals competing for cultural forms and cultural forms competing for individuals (i.e., their time, attention, energy, etc.). In the SS model, individuals are defined as niche spaces—a particular location in "Blau Space" (McPherson 2004)—given by their sociodemographic characteristics. Network ties play an important role in this formulation, insofar as competition and movement of cultural forms across sociodemographic space occurs by way of the transmission of cultural taste through network ties characterized by sociodemographic similarity (homophily).

If, however, as we have seen, cultural tastes are more stable and "sticky" than previously thought, the one-sided structural-selectionist assumption of the individual as a passive receptacle of tastes and behaviors produced by a largely *exogenous* and (for the purposes of analysis) *unchanging* network structure can be seen as problematic. Abandoning the exogeneity and stability assumptions, we can begin to think of an *inverted ecology* in which different types of network relations exist *because* of the cultural contents that they serve to transmit (i.e., a Star Trek fan club), and thus "compete" with alternative types of social connections to serve as the carriers of different forms of cultural information. This model would be more consistent with the observed fact of endemic volatility in personal relations, which suggests a Darwinian process whereby old network connections "die" and new ones are "born" constantly through the life course. It is possible that this "relational ecology" and cross-tie com-

petition (and possible mutuality) is driven by the types of compatibility between certain forms of culture and particular types of social connections discussed here.

## CONCLUSION

Most empirical research in the sociology of culture has concentrated on the socio-structural determinants of culture consumption patterns, but has had little to say on the effects of different forms of cultural taste on the makeup of the local social structure that surrounds the individual. In this article I have proposed a model of the conversion of cultural into social capital that, inspired by Bourdieu's and DiMaggio's original observations, incorporates insights from network theory to show how different forms of culture consumption can lead to different types of ego-network structure and composition. The model distinguishes two types of practical strategies of conversion of cultural into social capital, generalized and restricted, and hypothesizes that popular and highbrow culture consumption, respectively, should be associated with each type of conversion into social capital. Consistent with this view, the empirical evidence shows that popular culture consumption has a positive effect on weak-tie ego-network density, and thus to social connections that transcend local social boundaries, but not on the number of strong ties. The enabling effect of highbrow culture consumption, on the other hand, proves to be almost exclusively confined to ego-networks that are richer in stronger, local ties, especially those that are characterized by intimacy and particularistic flows such as advice and emotional support.

This model is in line with classical theoretical proposals connecting universal and widespread cultural forms and ideas (such as the notion of the "person") and social integration (Durkheim [1933] 1997), and with more recent contentions regarding how mass produced popular culture comes to play that integrative role in modern societies (Anderson 1991; Calhoun 1988; Schudson 1994). The conversion by way of social interaction imagery proposed here also shows a way in which to relate cultural taste and social relation that highlights the active role of culture in shaping and transforming network relations. One of the key insights that emerges from this reformulation is the social value of popular culture, which appears to be the "safe" form of cultural knowledge responsible for the formation of bridges across distant social positions and locally bounded relational clusters, the very same feature that makes large-scale human social networks a "small world" (Milgram 1967; Watts and Strogatz 1998). We can in this way reformulate the notion of the omnivore style of culture consumption as an example of complementarity in cultural resources. This cultural complementarity appears to be characteristic of the younger upper-middle classes and is therefore isomorphic with and helps sustain the complementarity of their network relations, which in its turn—consistent with Bourdieu's intuition regarding the mutually reinforcing relationship between the different forms of capital—aids in the reproduction of their advantageous position in the social structure.

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