

From exclusive to inclusive elitists and further: Twenty years of omnivorousness and cultural diversity in arts participation in the USA

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Abstract

Research on cultural omnivorousness is expanded by examination of cultural participation and by anchoring omnivorousness alongside other patterns of cultural consumption in a comparative context over time in the USA. Between 1982 and 2002, at the aggregate level little change was found in cultural consumption of live performing arts, but patterns of attendance did change, with an increase in cultural differentiation. It was expressed in quasi-omnivorous and entertainment patterns that drew consumers away from more traditional highbrow consumption patterns. Increase in cultural differentiation was associated with rise in educational levels; this may reflect a link between the breadth of consumption patterns of the elite and their need for scale and synthesis in cultural knowledge.

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1. Introduction

Pierre Bourdieu's theory of taste (Bourdieu, 1998 [1979]) points to the habitus as a key mechanism in the dialectical relationship between the way individuals construct reality and the social structure that constrains them (see also Csikszentmihalyi, 1988). The habitus – cognitive structures through which people deal with the social world – is a manifestation of internalized, embodied capacities that reflect divisions in the social structure, such as age, gender, and social class. Bourdieu's theory predicts a distinct and univorous consumption pattern for the upper classes, who adopt cultural tastes that are considered highbrow to

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establish a distinction between them and others. In his seminal book of 1979, *La Distinction: Critique Sociale du Jugement*, Bourdieu provides extensive evidence of this prediction in the context of French society in the 1970s.

Several works have since challenged Bourdieu's theory of taste to see if it has withstood the test of time and place in different contexts (e.g., DiMaggio, 1987; Peterson and Simkus, 1992; Peterson and Kern, 1996; van Rees et al., 1999; Bihagen and Katz-Gerro, 2000; Katz-Gerro, 2002). One critique that modified Bourdieu's framework argued that contemporary elite consumers prefer to master a wide range of cultural competencies rather than a limited one; they are characterized by an omnivorous cultural consumption pattern. In this paper we continue this line of research and offer an evaluation of Bourdieu's theory of taste in the context of American society in two main respects. First, we portray the evolution of cultural consumption clusters over the last 20 years to see the relative distribution of univorous and omnivorous patterns of cultural consumption in the performing arts space, over time. Second, we analyze change over time in the socio-demographic correlates of the omnivorous pattern whose dominance was established by Peterson and Kern (1996). Our research design allows us to show whether American society, as represented by the sample, has become more omnivorous by changing its patterns of cultural consumption, and whether the omnivorous pattern reflects the changing behavior of all Americans or only of specific groups of consumers.

1.1. *Cultural omnivores*

In a series of articles that spurred a new research direction in the sociology of culture, Peterson and colleagues documented and analyzed a cultural phenomenon that links cultural breadth with social position (Peterson and Simkus, 1992; Peterson and Kern, 1996; Peterson, 1997). Their work depicts cultural omnivores, typically members of the social elite, who express preference for a variety of cultural tastes down the cultural hierarchy: highbrow, middlebrow, and lowbrow. Highbrow culture refers to cultural forms that are considered serious, desirable, and sophisticated. Middlebrow taste refers to those that have been in the mainstream of commercial culture. Lowbrow tastes refer to genres rooted in marginal groups in terms of ethnicity, region, religion, etc. (Peterson and Kern, 1996). These works and others have applied the omnivore thesis in different contexts (for a review see Peterson, 2004) and have mainly shown that a major shift in the way of displaying status through taste has been taking place.

Approaching a similar subject matter from a different but relevant direction, Douglas and Isherwood (1996 [1979], p. 38) maintained that consumer behavior and consumer goods "make visible the categories of culture and contribute to their stability." This approach looks beyond the functional role of goods and the way they are used to display competitive status to emphasize the social meaning goods carry and communicate. Thus, Douglas and Isherwood complement the material analysis of goods with a cultural analysis focusing on the way goods maintain social relationships. Their contention is that the cultural breadth of consumers depends on their need for scale and synthesis. Scale refers to the extent of cultural knowledge an individual holds, and synthesis depends on integration of this knowledge. Extent of knowledge (scale) is important, but more important is the ability to assemble pieces of information into a coherent whole (synthesis): "... in our language the cultured person has made of what he knows a synthesis so complete that his behavior implies a natural mastery" (Douglas and Isherwood, 1996 [1979], p. 52).

1.2. *Consumption patterns and cultural differentiation*

The emphasis on (1) feeling comfortable with integrating various kinds of cultural competencies, and (2) the resulting omnivorous taste profile, both imply a research focus on the features of cultural differentiation. Csikszentmihalyi (1988) proposed that evolution in culture means increasing complexity of the symbols that express culture, leading to ever more alternatives for the construction of identity and meaning. Complexity, in turn, is positively linked to differentiation and integration. Whereas differentiation allows one to interpret different expressions of culture, integration is the capacity to use these symbols of culture, to interrelate them to construct meanings and identities.

Similarly, DiMaggio (1987) proposed that the number of genres into which an Arts Classification System is divided represents a degree of cultural differentiation. This emerges from the interaction between producers, who offer new genres to differentiate themselves from other producers, and consumers, who demand new symbolic forms of expression (DiMaggio, 1987, p. 447). Keeping to DiMaggio (1987) and Csikszentmihalyi (1988) frameworks, we propose to define the coordinates of cultural differentiation as the number of distinct cultural consumption patterns manifested in our data. Over time we would expect to witness a more complex system of meanings, that is, a more differentiated set of patterns of cultural consumption.

Culture's capacity to spread is shaped mainly by education. Bourdieu (1998 [1979]) proposed that greater access to higher education increases the extent to which consumers are trained in artistic classification systems and the ease with which they appropriate new artistic genres. Education increases consumers' cultural capital and affects their ability to interpret and appropriate expressions of culture (see Bernstein, 1977). If cultural capital motivates consumers to innovate and adopt new artistic genres (DiMaggio, 1987), economic capital provides the material resources needed to appropriate them, again because they make visible and stable the categories of culture. We would expect that as consumers become more educated and enjoy higher levels of income, their patterns of cultural consumption will become more complex and more differentiated.

1.3. *Determinants of cultural differentiation*

So far we have reasoned that we expected to find a growing degree of cultural differentiation in the evolution of cultural consumption, and that such differentiation would be mainly associated with the rise of educational and income levels in society. But did all Americans have the incentives and resources to evolve culturally, to become more consumptively complex? That is, did the omnivorousness trend spread homogeneously among all Americans, or did it characterize specific strata? Accordingly, we next ask which structural conditions are responsible for cultural differentiation.

The link between Douglas and Isherwood (1996 [1979]) depiction of cultural categories as carriers of information that help individuals interpret the world and make sense of it through a structured system of meanings formed by consumer behavior, and DiMaggio (1987) and Csikszentmihalyi (1988) analysis of cultural differentiation draws attention to social structural changes that influence the fragmentation of cultural consumption, hence the need for scale in terms of cultural knowledge. The use of cultural categories to mark social distinction structures society into a hierarchy of groups (see also Holbrook et al., 2002; Katz-Gerro, 2004, *in press*; López-Sintas and García-Álvarez, 2005). Specifically, we expected that a social elite would have

greater need of scale and synthesis in consumption to be able to distinguish itself and to communicate their advantaged social position; so controlling for differences in socio-demographic factors (e.g., marital status, urban status, gender, and race), we expected highbrow consumers (the social elite) to be in greater need of scale in cultural consumption, and that this would increase over time (see also [White and White, 1993](#)). But research has shown that elitist highbrows can be divided into inclusive and exclusive consumers ([Bryson, 1996, 1997](#)), whose needs of scale and synthesis of consumption are different. Inclusive elitist highbrows are consumers with a taste for highbrow culture but also for lowbrow culture, and at levels greater than low-scale consumers ([Bryson, 1996; Peterson and Kern, 1996](#)). Exclusive elitist highbrows are consumers with a taste for highbrow culture and distaste for lowbrow genres.

In sum, our main interests in this research lay in the differentiation of cultural consumption patterns over time and in the degree these were shaped by structural changes. We employed three surveys conducted in the USA over a period of 20 years. American society experienced a rise in the educational level of its population, as [Table 1](#) shows (see the data section), especially in the higher educational level (college or university). This means that we would expect a more differentiated system of consumption patterns than 20 years before. We then tested a proposition inspired by [Douglas and Isherwood \(1996 \[1979\]\)](#), that the breadth of highbrow elite consumers of the arts depends on their need of scale and synthesis to have their advantaged social position confirmed. To find support for this we would expect a hierarchy of needs for scale (omnivorousness) that consists of inclusive elitist highbrows (omnivores), exclusive elitist highbrows (snobs), non-highbrows with a lowbrow taste (lowbrows), and non-highbrows with a lowbrow distaste (passive).

2. Research design

2.1. Research questions

We address two research questions. First, to explore the degree of fragmentation in categories of consumption we ask which combinations of arts attendance best describe consumption patterns in each of the three survey years. We want to establish clusters of arts attendance that adequately capture consumption patterns in each sample. By doing that, we will show whether fragmentation has occurred and the degree to which consumption patterns have remained stable. Second, we ask what are the cultural factors (in terms of tastes) and structural factors (in terms of socio-economic characteristics) that contribute to understanding the omnivore phenomenon. Specifically, we decompose omnivorousness to see the relative contribution to this measure of the following tastes: highbrow taste, lowbrow distaste, and the interaction between the two. We further control for period and cohort effects, and several socio-economic variables.

2.2. Data

Data were obtained from the survey of Public Participation in the Arts [1982–2002] conducted by the Research Division of the National Endowment for the Arts, NEA (<http://www.nea.gov>). The survey is conducted every 5 years and explores Americans' participation in the performing, visual, and literary arts. Here we used data from 1982, 1992, and 2002 ([NEA, 1985, 1993, 2003](#)), all collected as a supplement to a larger national survey, the National Crime Survey (1982, 1992) or the Current Population Survey (2002). The 1982 survey collected data from 17,254 US households; in 1992 the sample consisted of 12,736 households; in 2002 there were 17,135

Table 1
Descriptive statistics for dependent and independent variables by year

Variable	1982	1992	2002
Jazz (%)	9.42	10.26	10.42
Classical (%)	13.21	12.63	11.78
Opera (%)	3.11	3.51	2.99
Musical (%)	18.80	17.72	17.17
Play (%)	12.07	13.49	12.50
Ballet (%)	4.36	4.71	3.76
Art museum (%)	22.13	26.36	27.05
Historical park (%)	37.03	34.49	32.11
Art fair (%)	37.03	40.90	34.77
Omnivorousness (S.E.)	0.93 (0.01)	1.16 (0.01)	1.55 (0.02)
Highbrow taste			
Yes (%)	0.88	0.67	0.92
Lowbrow distaste			
Yes (%)	94.51	83.48	79.35
Highbrow taste × Lowbrow distaste			
Yes (%)	0.77	0.36	0.37
Birth year (S.E.)	1939 (0.14)	1950 (0.15)	1956 (0.14)
Educational level			
Less than high school (%)	12.56	13.17	5.28
Some high school (%)	13.22	13.79	7.82
High school (%)	37.07	33.71	32.54
College or higher (%)	37.15	39.33	54.37
Income level			
Below median (%)	41.69	44.47	47.67
Metropolitan area			
Yes (%)	27.26	32.95	74.32
White			
Yes (%)	87.71	86.06	86.00
Marital status			
Single (%)	19.68	28.41	21.07
Divorced or separated (%)	8.88	9.72	13.72
Widowed (%)	7.59	6.95	7.50
Married (%)	63.85	54.92	57.72
Gender			
Male (%)	46.47	46.83	45.12
Sample size	17077	16496	15383

households. Picking these three surveys made it easier to compare data; data of the first two were collected by the same statistical agency following the same procedures, and those of the third were collected jointly with the Current Population Survey. All non-institutionalized individuals living in the USA were eligible and those above age 18 in the sampled households were asked to respond. Surveys had the following overall response rates: 85% for 1982 (25% conducted by phone), 80% for 1992 (80% conducted by phone), and 70% for 2002 (90% conducted by phone). For additional information about the SPPA data, see the National Endowment for the Arts web site (<http://www.nea.gov/pub/ResearchReports.html>).

2.3. Variables

2.3.1. Omnivorous attendance at live performing arts

Interviewees were asked to indicate whether in the previous 12 months they had attended any of a series of nine live art performances and cultural events: live jazz, classical music, opera, musical stage plays, plays (not musical), ballet performances, art museums, arts-crafts fairs, and historical park/monument sites. Possible answers were ‘no’ (coded 0) and ‘yes’ (coded 1). We operationalized the omnivorousness construct as the number of live performing arts that respondents attended during the surveyed year (see [Table 1](#) for descriptive statistics). Omnivorousness ranged from zero to nine, with 48,956 total respondents with valid answers, and an overall mean value of 0.93 for 1982, 1.16 for 1992, and 1.55 for 2002. Although mean omnivorousness increased over time, the increase was very moderate and reflected: (1) very low attendance rates overall, or (2) large differences in attendance rates among groups. We will discuss this point further below.

Our operationalization of omnivorousness departs from [Peterson and Kern \(1996\)](#) original measure and joins other researchers who modified the original definition (as reported in [Peterson \(2004\)](#)). [Peterson and Kern \(1996\)](#) asked whether highbrows were more interested in middlebrow musical genres, lowbrow musical genres, or both, in comparison with non-highbrows. Their research design did not measure whether non-highbrows were interested in highbrow musical genres. We were interested in omnivorousness observed in performing arts attendance, particularly in differences between (1) highbrows and non-highbrows, and (2) highbrows with distaste for lowbrow arts and highbrows with a preference for lowbrow arts.

2.3.2. Highbrow taste

To define highbrow taste, [Peterson and Kern \(1996, pp. 900–901\)](#) used a measure of preference for classical music and opera, and choosing at least one of the two forms as best liked among various kinds of music. Their choice of classical music and opera was based on the correlation of these musical tastes with attendance at performances of plays, ballet, classical music, musicals, art galleries, and the opera. We, instead, chose to base our measure of highbrow taste on a multiple correspondence analysis (MCA) ([Greenacre, 1984](#)) in order to let the data tell us which items scored high on a highbrow-lowbrow scale, as [Peterson and Simkus \(1992\)](#) did. Due to MCA’s optimal scaling properties it is considered the categorical equivalent to principal component analysis ([Nishisato, 1994](#)). The analysis yielded a scale that suggested that attendance at the opera and the ballet were the most highbrow activities, situated farthest from other activities, even classical music.¹ Our measure of highbrow taste was a dummy variable carrying 1 if a respondent had gone to both an opera performance and a ballet production in the previous year. This variable allowed us to estimate the contribution of highbrow taste to the omnivorousness measure.

2.3.3. Lowbrow distaste

We next identify respondents who report aversion to lowbrow arts events, to be able to estimate the contribution of a snobbish taste to the contours of the omnivore construct. Again we use the multiple correspondence analysis to identify two cultural activities that are the most

¹ Results of correspondence analyses are not reported here but are available on request.

popular ones and the farthest from the two highbrow performing arts items. These are the art and craft fair and the historical park/monument. The variable that indicates lowbrow distaste carries 1 for respondents who never went to either of these. They are respondents who have distaste for the most popular live cultural events.

2.3.4. *Exclusive highbrows*

We use the interaction between highbrow taste and lowbrow distaste to create an additional variable that combines the two. Exclusive highbrows are respondents who attend highbrow performances and avoid lowbrow performances, as opposed to *exclusive lowbrows*, who participate in lowbrow activities but not in highbrow ones. Similar patterns of snobbish cultural consumption have been found in Dutch reading habits (van Rees et al., 1999; van Eijck and van Rees, 2000) and in the Spanish performing arts space (López-Sintas and García-Álvarez, 2002). They are often characterized by a relatively high consumption of highbrow genres and a very low consumption of popular genres.

2.3.5. *Period effect*

Measured as a categorical variable with three levels, 1982, 1992, and 2002. The reference level for estimating the model is 1982.

2.3.6. *Cohort effect*

A metric variable of respondents' year of birth produced by subtracting respondents' age from year of survey. For the 2002 survey we had to use the central values of age categories, as actual age was not recorded.

2.3.7. *Controls for cohort structural variables*

Table 1 provides descriptive statistics of the socio-demographic control variables.

Indicators of social class. Direct indicators of social class were not available because respondents' occupation was not recorded in the 1992 survey. Instead, we used educational level as an ordered variable with four levels: primary school (0 through 8th grade, the reference category), some secondary education (9th through 12th grade, no diploma), secondary school (diploma or equivalent), college or higher (bachelor, masters, and doctoral degrees). We had to recode the educational level as the 2002 survey changed the previous coding of education in years. Income level was recorded as an ordered variable with two levels: below the median income distribution (the reference level) and equal to or above the median income.

Barriers to participation included marital status and urban status. Marital status is coded with four levels (single as a reference level, married, divorced or separated, widowed). Urban status is a dummy variable indicating whether respondents' living quarters had been categorized as a metropolitan statistical area (see Slifkin et al., 2004).

Differences due to socialization are indicated by gender (female, male) and race (black + other, white).

3. Results

Next, we present the analytic procedure for measuring the way patterns of attendance changed across the three surveys. We then present the results pertaining to this analysis, followed by the

analytic procedure for analyzing the correlates of omnivorousness, and our interpretation of the results.

3.1. *Measuring the stability of patterns of attendance*

3.1.1. *Modeling patterns of attendance*

From a look at attendance figures by survey year (see Table 1), little seems to have changed in the 20 years analyzed. Only plays, art museums, and jazz increased their numbers a little. It is difficult to make sense of this trend when each performing arts indicator is analyzed separately, as reflected in DiMaggio and Mukhtar (2004). But if we take the relationship among attendances at the nine performing arts indicators together, as patterns (the multi-way cross classification table among the nine indicators that describes the pattern of attendance), differences between the survey years may be more relevant (see Birkelund et al., 1996).

To explore that, we employed latent class analysis, which is a method to determine whether the observed relationship among the nine performing arts indicators can be explained in terms of a finite number of latent patterns of behavior (Lazarsfeld and Henry, 1968).² The latent class model (LCM) assumes that the association between cultural indicators (symbolized as Y_1, Y_2, \dots, Y_9 , or \mathbf{Y} for the entire set of indicators) is due to unobserved heterogeneity in the population (types of attendees). To account for consumers' heterogeneity in responses, the LCM splits the original sample into T clusters or groups of attendees, and then the association between performing arts attendance indicators is completely explained, in this case, by probabilistic class membership. The formulation of a sample is as follows:

$$P(\mathbf{Y} = \mathbf{y}) = \sum_{t=1}^T P(t) \prod_{i=1}^9 P(Y_i = y_i | t)$$

Then, if when applying LCM for each one of the three survey year, v , we find that the observed relationship among responses on the nine performing arts items proves to be the same, this means that the underlying patterns of attendance did not change in terms of number of different types of attendees, size of each type, or probabilistic behavior of each type. But if each survey year must be explained by a different latent class model (each model with T different types of attendees, different sizes, $P(t|v)$, or different probabilistic behavior, $P(Y_i = y_i | t, v)$, then the apparently stable attendance figures in Table 1 could be misleading, hiding an important fact: that a structural change occurred in the population, which led to the emergence of new types of consumers. Of course results in between the two extreme cases, complete heterogeneity and complete homogeneity, are also possible (see Clogg and Goodman, 1984; McCutcheon and Mills, 1998). We proceed first by presenting the results of estimating the most general LCM, that is a model where we allow survey years to vary in the number of types of attendees, their cluster size, and probabilistic behavior; then we try to simplify this general model restricting some parameters.

3.1.2. *Results of stability of patterns of attendance*

We begin this section by first considering the 1982 sample. From the results presented in Table 2, we observe that the nine performing arts indicators considered are clearly related to each

² Readers interested in the strengths and weaknesses of latent class models and their performance in comparison to other clustering methods, see Magidson and Vermunt (2001, 2002).

Table 2
Statistics for selecting patterns of attendance for each year and for the pooled sample^a

Model	1982			1992			2002			Pooled sample			d.f.	Npar
	L^2	BIC	CAIC	L^2	BIC	CAIC	L^2	BIC	CAIC	L^2	BIC	CAIC		
M ₁	4859.4	668.9	166.9	16232.1	11490.0	10987.9	22525.4	17636.4	17134.4	43616.9	27909.8	26403.8	1506	27
M ₂	1032.2	−3074.8	−3566.8	2370.2	−2277.3	−2769.3	3072.7	−1718.9	−2210.9	6475.2	−8919.0	−10395.0	1476	57
M ₃	627.8	−3395.6	−3877.6	945.05	−3608.1	−4090.1	1175.5	−3518.6	−4000.6	2748.5	−12332.8	−13778.8	1446	87
M ₄	483.5	−3456.5	−3928.5	748.1	−3710.6	−4182.6	874.7	−3722.1	−4194.1	2106.3	−12662.1	−14078.1	1416	117
M ₅	450.4	−3406.1	−3868.1	629.5	−3734.7	−4196.7	667.2	−3832.2	−4294.2	1747.2	−12708.3	−14094.3	1386	147
M ₆	411.5	−3361.5	−3813.5	557.2	−3712.6	−4164.5	530.2	−3871.8	−4323.8	1498.9	−12643.6	−13999.7	1356	177
M ₇	382.5	−3307.0	−3749.1	538.1	−3637.1	−4079.1	484.1	−3820.4	−4262.4	1404.9	−12424.8	−13750.8	1326	207
M ₈	363.5	−3242.6	−3674.6	502.4	−3578.4	−4010.4	460.1	−3747.1	−4179.1	1326.1	−12190.7	−13486.8	1296	237

^a Models have been estimated with LatentGold3 program, see Vermunt and Magidson, 2000.

other, and this association grows as we move from 1982 to 1992 and to 2002 (even taking into account the sample size).³ Note that for 1982 a model with four patterns of attendance can explain the association among the manifest indicators. That is, once we take into account the four patterns of attendance, the association among the nine indicators within each pattern is removed, as suggested by the likelihood-ratio chi-square value for this model, L^2 , which is 483.5 (on 472 d.f., p -value 0.35). Comparing the chi-square value of the selected model with the corresponding value obtained for the independence model (supposing one pattern of attendance only), 4859.4, we can compute the explanatory power of the selected model, which stands at 90% (only $483.5/4859.4 = 0.0995$ remains to be explained).

The indicators pertaining to the 1992 sample were also related, even more than in 1982 (compare the likelihood-ratio chi-square values of both years for the independence model, M_1 , in Table 2). For that year four patterns of attendance were not enough to explain the association, and it was the model with five patterns that showed the best fit, with a likelihood-ratio chi-square value of 629.5 (on 462 d.f.). Nevertheless due to the sparseness of the data resulting from a greater number of patterns needed to explain the association among the indicators, the likelihood ratio chi-square values could not be trusted; we based our decision on two information criteria, the BIC and CAIC (yet when the L^2 value had the correct distribution, the three criteria selected the same model, as happened in 1982). BIC and CAIC suggested that the best model was the one with the lowest value, and in this case it was the model with five patterns of attendance that explained 96% of the association (only 4% remained to be explained, $629.5/16232.1$).

Finally, with respect to the 2002 sample, we found that the nine performing arts indicators were also related to each other, as suggested by the likelihood ratio chi-square value for the model of independence (see the M_1 row and 2002 columns in Table 2). Here we needed an additional pattern of attendance to explain the association among the indicators. The model with six patterns was favored by the two information criteria, the one explaining 98% of the association (only 2% remained to be explained, $530.2/22525.4$).

After analyzing the three samples separately we tried to find whether a more parsimonious model could explain all three samples simultaneously. Therefore, we tried to estimate a model with the same number of patterns of attendance, T , but allowing heterogeneity for the size of the patterns for each of the v surveys, $P(t|v)$, and conditional probabilities, $P(Y_i = y_i|t, v)$. The model that best explained the association among the full sample indicators was the one with five patterns of attendance. This model yielded an explanation of 96% of the association (only 4% remained to be explained, $1747.2/43616.9$). Nevertheless, when comparing this parsimonious model with the three previously estimated (one for each year), we saw that the parsimonious model produced a combined L^2 value of 1642.03 whereas the heterogeneous one produced a smaller value, as expected; still, the parsimonious model did not release any degrees of freedom. In sum, the comparison suggested that there had been an increase in the number of patterns of attendance that characterize the American samples, as regards performing arts attendance.

Table 3 describes the different types of attendees in terms of their probabilistic behavior for three survey years. We named them as passive, lowbrow, quasi-omnivore, entertainment, snob, and omnivore. We see from Table 3 how the diversity of types of attendees increased from 1982 to 2002, though the group of passive respondents remained stable over the three samples in terms

³ The likelihood-ratio chi-square value for the model that states that responses on the nine performing arts indicators are statistically independent (model with 1 class, M_1) is higher for 2002 than for 1992 or 1982. The number of valid cases in each sample is: 4220 cases in 1982, 18,775 in 1992, and 16,969 in 2002.

Table 3

Patterns of attendance at the performing arts 1982–2002^a

	Passive	Lowbrow	Quasi omnivores	Entertainment	Snob	Omnivores
Patterns of attendance 1982						
Cluster size ($P(t)$) (%)	53.6	21.9			13.0	11.5
Attendance conditional probabilities ($P(Y_i = y_i t)$)						
Jazz (%)	3.3	10.6			12.2	31.8
Classic music (%)	0.4	9.7			20.0	60.1
Opera (%)	0.0	0.0			6.1	13.4
Musicals (%)	1.7	14.6			47.2	74.6
Plays (%)	0.7	4.9			23.6	59.0
Ballet (%)	0.0	1.6			4.1	23.9
Art museum (%)	2.6	40.4			19.7	81.3
Art fairs (%)	15.2	75.4			37.5	84.2
Historical site (%)	10.4	80.9			28.3	88.1
Patterns of attendance 1992						
Cluster size ($P(t)$) (%)	52.8	16.2		17.5	8.6	4.9
Attendance conditional probabilities ($P(Y_i = y_i t)$)						
Jazz (%)	1.1	9.8		14.9	35.2	50.6
Classic music (%)	1.0	5.6		21.5	36.9	87.7
Opera (%)	0.1	0.2		6.2	4.1	38.2
Musicals (%)	1.8	3.6		43.8	55.6	75.7
Plays (%)	1.2	2.4		28.9	45.6	71.3
Ballet (%)	0.4	1.9		7.0	11.0	41.7
Art museum (%)	1.7	44.4		36.5	86.5	91.5
Art fairs (%)	13.2	71.3		61.1	91.3	78.1
Historical site (%)	7.6	67.5		44.6	90.2	80.9
Patterns of attendance 2002						
Cluster size ($P(t)$) (%)	55.4	19.8	10.5	8.2	3.5	2.6
Attendance conditional probabilities ($P(Y_i = y_i t)$)						
Jazz (%)	1.6	9.1	36.0	11.7	39.6	61.3
Classic music (%)	0.9	3.5	43.8	14.5	67.6	93.0
Opera (%)	0.2	0.7	5.4	3.1	18.3	48.2
Musicals (%)	1.6	8.1	58.6	63.4	30.1	85.9
Plays (%)	1.0	6.0	49.3	35.3	20.1	75.0
Ballet (%)	0.3	1.5	10.8	5.4	11.0	51.1
Art museum (%)	1.4	49.4	93.3	26.7	58.1	94.8
Art fairs (%)	10.1	62.8	85.0	54.8	34.6	78.8
Historical site (%)	6.2	62.3	89.4	40.4	45.8	79.1

^a Parameters were estimated using LatentGold3 program, see Vermunt and Magidson, 2000.

of size and probabilistic behavior (to make it easier to interpret Table 3, we only show the positive probabilistic behavior; for instance, if an interviewee was classified as a passive consumer, he or she has a probability of 3.3% of going to any jazz concert). Between 1982 and 1992 we see a reduction in the size of the omnivorous and snob types. This reduction in the two highbrow clusters jointly with a reduction in the lowbrow taste group of attendees resulted in a new type, which we called entertainment, which includes those attending musicals, plays, and outdoor activities. Although jazz was not yet a predominant activity for this type of attendees, its conditional probability of attendance was the highest among all activities.

Year 2002 showed an increase, once more, in the range of groups of attendance. A new group with a quasi-omnivorous taste emerged, one with a high probability of attendance at all the performing arts indicators except opera; even ballet productions had a relatively high probability of attendance. Once more we see that the size of the highbrow elitists group diminished, as did the group interested mainly in entertainment. The lowbrow group of attendees increased in size, together with the passive pattern of attendance.

What do we learn from this analysis? We propose a complex depiction of the way taste constellations have changed over time in American society. We look at stylistic unity in a new way and can discern differences between the patterns/constellations that art performance consumers formed over time. Much like Peterson and Kern (1996) we show that snobbish taste decreased over the years and omnivorousness increased, but our fine-tuned analysis suggest a decline in omnivorousness and rise in quasi-omnivorousness. On the other hand, the size of the lowbrow consumers group decreased, and then increased in 2002 without reaching the 1982 levels.

After establishing structural changes in patterns of arts attendance over time, we would like to take a closer look at the correlates of omnivorousness, and in particular focus on the way highbrow taste, lowbrow distaste, the interaction between them, period effect, and cohort effect shaped omnivorousness. We now know that period is important and we know that the interplay between various patterns of taste occurs alongside changes in omnivorousness.

3.2. *Model for analysis of the correlates of omnivorousness over time*

A linear model is estimated where the omnivorousness construct is regressed on the alternative explanations and cohort structural variables (for details of cohort models see Rodgers, 1982a,b; Smith et al., 1982).

$$y_i = \mathbf{X}\boldsymbol{\beta} + \varepsilon_i$$

To take into account the effect of y_i errors we used a robust and very resistant method, the M-estimators described in Venables and Ripley (1999). The full model includes highbrow taste, lowbrow distaste, the interaction between the two, period effect, cohort effect, education, marital status, urban status, gender, and interactions of period with all the other variables. The variable for cohort effect captures the fact that respondents born in different years have experienced different events during their lives. We measure the cohort structural effect through control variables that take into account differences in demographic composition. The variables for period effect include all the effects of the immediate environment as the current societal value that favor or deter attending the art, and not measured by the other variables in the model.

3.2.1. *Model selection*

First we estimated the simplest model with main effects (on a sample of 48,956 observations). Then we proceeded to eliminate interaction effects, which minimized the Akaike's Information Criterion, AIC. This statistic suggested that all main effects were statistically significant, but when the full model (M_0) was tested against the reduced ones, each reduced model eliminating one interaction effect at a time, the Akaike Information Criterion clearly favored a model without the interaction between period and birth year ($M_1 = 154897.9$ versus $M_0 = 154901.7$). However, when M_1 was tested against a model that

did not include the period \times highbrow taste \times lowbrow distaste interaction effect, M_2 , both models produced the same value for the statistic. As we were interested in this interaction and the AIC did not reject it, we decided to report the model with period \times highbrow taste \times lowbrow distaste effect, M_1 .

3.2.2. Model parameters

The estimators of the resistant linear model are presented in Table A.1, in the appendix. To make the interpretation easier we have plotted the model's effect displays (see Fox, 1987, 2003 for further details). Effect displays are constructed by identifying high-order (interaction) terms in the linear model estimated. Fitted values under the estimated linear model are computed for each high-order term, where main effects marginal to an interaction are absorbed into the high-order term plotted, allowing the predictors to vary while taking into account the interactions. To fit the values, other predictors are fixed at typical values: the mean in case of covariates, and proportion in the sample in the case of factors.

3.2.3. The role of tastes in explaining the omnivorous trend

For 1982 (the period of reference), attendees with a highbrow taste were almost 3.6 items higher on the omnivorousness measure on a scale of 0–9 (see Table A.1 in the Appendix A), compared with non-highbrow taste and after controlling for cohort structural effects. Twenty years later, in the 2002 sample, attendees received an average score of 5.9 ($=3.6 + 1.1 + 0.3 + 0.5 + 0.3 + 0.1$) on the same measure. At the same time, the main effect of lowbrow distaste reduced respondents' omnivorous score by 2.7 in 1982 in comparison to lowbrow taste consumers, the overall effect being -1.8 ($= -2.7 + 1.1 - 0.4 - 0.2 + 0.3 + 0.1$). Being an exclusive highbrow increased the omnivorousness score by 1.1 items compared with non-highbrow taste consumers with lowbrow taste (the reference category), and these effects changed with the period analyzed, although not in a statistically significant way (see Table A.1 in the Appendix A).

Fig. 1 plots the evolution of highbrow taste and lowbrow distaste effects taking into account temporal effects. Inclusive highbrows – consumers with highbrow and lowbrow taste had a higher level of omnivorousness (approximately 7 out of 9 items; See Fig. 1, *HBrow taste* in panel *LBrow distaste: No*) than exclusive highbrows (approximately six items on average; see Fig. 1, *HBrow taste* in panel *LBrow distaste: Yes*). During the period 1982–2002, inclusive highbrows slightly increased, by 0.3 items, the distance between them and exclusive highbrows. Non-highbrows on the other hand actually did not advance in the race toward omnivorousness; only non-highbrows liking lowbrow art events showed an increase of 0.2 activities (nevertheless this temporal variation is not statistically significant). To sum up, highbrow taste had the strongest positive impact on the omnivorousness score, followed by lowbrow distaste with a negative impact.

3.2.4. Replacement of cohorts

The mean effect of year of birth on the omnivorousness measure was negative and statistically significant (see *t*-values in Table A.1), suggesting that the younger the person the less omnivorous his or her cultural participation in the performing arts' space of consumption. Over time, a tendency toward omnivorousness is apparent. In 1992, on average, a statistically significant increase was evident in the breadth of arts consumption compared with 1982, and the augment was a little bigger in 2002 and again statistically significant.

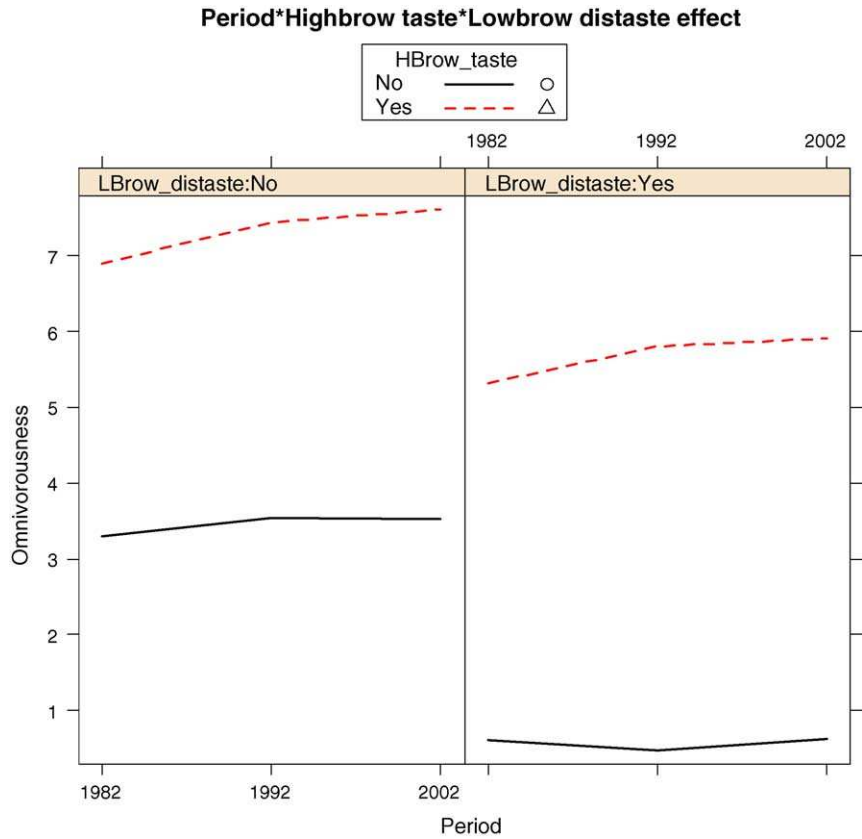


Fig. 1. Highbrow taste and lowbrow distaste effect displays.

3.2.5. Cohort structural effects

Indicators of social class. Household income followed a U-shape temporal pattern (see panel a in Fig. 2), decreasing its effect between 1982 and 1992 (0.1 activities for respondents with income above the median, and 0.03 for those below) and increasing back the effect in 2002, reaching levels higher than in 1982 for consumers with above the median household income (a net increase of 0.1 activities compared with 1982). Consequently, the net difference between respondents with income below and above the median in 1992 shows a statistically significant decrease in 2002.

Educational level had a greater effect at higher educational levels, as expected (see panel b in Fig. 2). Still, it depended on the period. Education had a greater impact on omnivorousness in 2002 (at all levels) than in 1982 and 1992, and higher educational levels had a minor impact in 1992 than in 1982.

Barriers to omnivorous live-arts consumption. Marital status, a barrier that stems from domestic duties, did statistically change its effect on the omnivorousness trend, especially during 1992, which seems to have been a year with little differences among the four categories of marital status. After 1992, results suggest a convergence to the 1982 pattern, except for the widowed and married categories that in 2002 are more similar to the behavior of singles. In general,

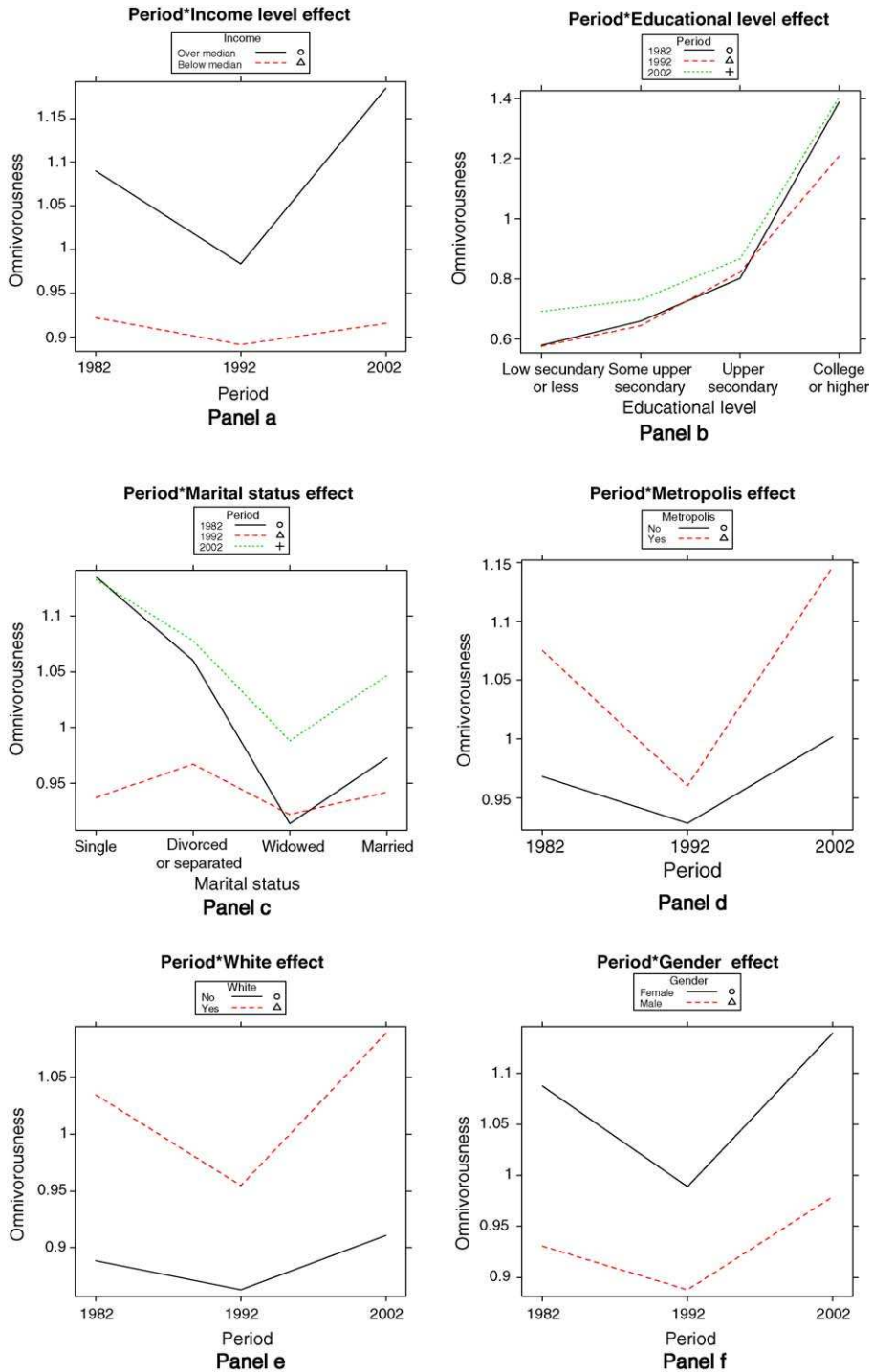


Fig. 2. Structural and socialization effect displays.

single and divorced respondents showed the highest omnivorousness behavior, and widowed and married respondents the lowest. Nevertheless, the effects are weak.

Living in a metropolitan area, as expected, had a positive impact on having an omnivorous taste (see Becker (2004) explanation about jazz places). Between 1982 and 1992 the number of cultural events attended decreased in general, but the decline was comparatively greater among people living in metropolitan areas (see the slope in panel d of Fig. 2); but in 2002 everybody evinced an increase in the number of activities attended, reaching levels higher than in 1982.

Racial and gender socialization. Being white (see panel e in Fig. 2), net of the effect of the other variables, increases respondents' omnivorousness score. During the whole period, however, we found the same pattern as in the rest of the structural and socialization indicators; that is, during 1992 we observed a reduction in racial distance. Males seemed less omnivorous than females throughout the period (see panel f in Fig. 2), but 1992 showed a statistically significant decrease in the omnivorousness score for both genders (females by 0.1 items, males by 0.05), so that men narrowed their distance from women. This reduction was compensated in 2002, when females and males attended more cultural events (females by 1.14 items, males by 0.98). Still, the difference remained.

Summary of findings: All the variables depended on the period in a statistically significant way (except for birth year). Overall, highbrows have become more omnivorous than lowbrows during the period, and attendees with a lowbrow distaste have increased the range of their performing arts attendance to include more middlebrow performances. On the other hand, as far as the cohort structural variables are concerned, women were more omnivorous than men; whites more than non-whites, single and divorced, city dwellers, higher income, higher education, and older. All these effects were in the expected direction.

4. Discussion and conclusions

We have contributed to recent literature on the omnivore thesis in several ways. First, we shifted attention from musical tastes to arts attendance, to emphasize the behavioral aspects of cultural capital that are more closely related to the concept of lifestyle as self-expression and to overt cultural choices. Second, we showed the way different arts attendance activities formed consumption clusters that evolved over a period of 20 years. Third, we were able to anchor the omnivore phenomenon in a comparative framework and discuss its different manifestations during those 20 years. Fourth, we described, over time, the effect of structural constraints on the omnivorous construct.

Our emphasis on arts attendance rather than tastes stems from a view of cultural capital as embedded in consumption practices. Those practices reflect a commitment that is missing from reports on cultural tastes. The content of cultural consumption is becoming a less powerful exclusionary tool than overt consumption practices that signify commitment to a certain lifestyle (Holt, 1998). Employing reports on attendance also allowed us (by means of a latent class model) to offer a more accurate, data-driven definition of patterns of cultural consumption – different types of attendees – and their characterization – size and probabilistic behavior – in a comparative framework over time.

We found support for Csikszentmihalyi (1988) and DiMaggio (1987) proposition that as cultural consumers become more educated they are more able to interpret and to integrate different expressions of culture, making cultural evolution possible. With the observed increase in educational attainment and affluence, we found an increase in the number of types of attendees

and an increase in the breadth of their arts consumption as the theoretical propositions would suggest (DiMaggio, 1987; Csikszentmihalyi, 1988; Peterson and Kern, 1996).

Concretely, results for 1982 suggested the existence of four types of attendees: passive, lowbrow, highbrow, and omnivorous. In 1992 we showed an increase in the differentiation of tastes, a new type of attendees formed by those subjects interested mainly in entertainment. In 2002 an additional type of cultural consumer emerged to explain the heterogeneity observed in attendees' behavior: the quasi-omnivorous. How did the size of the types of attendees change over time to accommodate the increase in the mixture of tastes? In 1992 compared with 1982, exclusive highbrows decreased by a third, inclusive highbrows decreased by half, and exclusive highbrows left opera and ballet out of their modal cultural consumption activities. At the same time, a type of attendees interested in entertainment emerged. In 2002, however, the entertainment pattern lost almost half its members and instead another type of cultural consumer emerged, which we named quasi-omnivorous because it involved a significant increase in the probability of attending ballet and opera. The quasi-omnivorous pattern seems to have attracted more than half of 1992s exclusive and inclusive highbrow consumers. To sum, we found that the differentiation of patterns of consumption occurred mainly among the old snobs (exclusive elitist highbrows) and the omnivores (inclusive elite highbrows). In contrast to these compositional changes, passive respondents were the only ones that had overall increased the size of their group, probably attracting previous attendees of lowbrow art performances.

Turning now to jazz performances and museums and art galleries, although their attendance increased, its distribution among the types of attendees was not even. Attendance at jazz increased among quasi-omnivores, snobs (exclusive elitists), and omnivores (inclusive elitists), and these were the only clusters characterized by jazz consumption. In contrast, probability of attendance at museums and art galleries increased among lowbrow consumers. DiMaggio and Mukhtar (2004) reported evidence of increased attendance at museums and galleries and jazz, but they were not able to trace how changes were distributed among different types of consumers.

Our findings regarding the evolution of consumption patterns and the correlates of omnivorousness combined shed new light on DiMaggio and Mukhtar (2004) recent analysis of trends in arts participation, looking at the same three SPPA surveys. DiMaggio and Mukhtar analyzed the data to find out whether the importance of the arts for social reproduction had declined between 1982 and 2002, as some previous research had suggested. They postulated a series of hypotheses, two of which are relevant to our paper. First, they anticipated that a decline in attendance would be more visible among younger cohorts. Our results suggest a similar trend concerning omnivorousness. Younger cohorts were less inclined to be omnivorous than older cohorts, even when controlling for a set of structural variables. This result is similar to Peterson and Kern (1996) finding for middlebrow musical genres, but not for their finding on preferences for lowbrow musical genres. Nevertheless, even though the period variable suggests a trend towards omnivorousness as in Peterson and Kern's study, when we take into account the interaction between period and other structural and socialization variables, we see that in 1992 these variables had a weaker effect than in 1982 or 2002.⁴ This result contrasts with recent research conducted on musical preferences during the same period that produced the opposite pattern: 1992 was the most omnivorous among the three surveys (López and Zerva, 2005).

⁴ Taking into account that the 2002 survey (unlike the 1982 and 1992 surveys) was conducted as a supplement to a different and larger national survey, the results seem robust (it would be different if the 1992 survey was the one conducted as a supplement of a different national survey).

Therefore, we tend to believe that in 1992 the performing arts had less power as a symbolic marker of status and a means for the social reproduction of status; however, further research is needed to vindicate this assumption.

DiMaggio and Mukhtar (2004) also hypothesized that decline in participation would be less visible in popular arts activities than in high culture events. Their results show that popular arts activities (which they name middlebrow), such as arts and crafts fairs, historic sites, and musical theatre, lost their public more quickly than the high culture arts. Our results attenuate this specific finding although support their general expectation: our analyses suggest that there was a moderate decline in the size of the lowbrow-taste type of consumer compared with the notable reduction in the size of highbrow types. DiMaggio and Mukhtar (2004) conclude that although evidence exists of some decline in arts attendance over the years, the arts still remain central to cultural capital, whose composition, they maintain, is undergoing change. Our findings further explicate this structural change, which is producing more cultural complexity through new patterns of arts attendance: quasi-omnivorousness and entertainment patterns.

Finally, our findings suggest that the omnivorousness trend developed unevenly over the 20 years analyzed, between highbrows and non-highbrows and between exclusive and inclusive elitist highbrows. As expected, the level and augmentation of the omnivorous pattern follows a hierarchy of need for scale in consumption that consists of inclusive elite highbrows, exclusive elite highbrows, non-highbrows with a lowbrow taste, and non-highbrows with a lowbrow distaste, listed in order from higher to lower need for scale of consumption.

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Appendix A

See Table A.1.

Table A.1
Resistant M-estimators from the linear regression of omnivorousness on the selected regressors^a

Coefficients	Value	Standard error	t-Value
(Intercept)	5.9833	0.5615	10.6566
Birth year	−0.0016	0.0003	−5.4084
Period: 1992	0.2012	0.0601	3.3493
Period: 2002	0.2377	0.0676	3.5146
Highbrow taste: Yes	3.5953	0.2122	16.9446
Lowbrow distaste: Yes	−2.6967	0.0306	−88.0973
Educational level: Some upper secondary	0.0805	0.0272	2.9552
Educational level: Upper secondary	0.2222	0.0237	9.3632
Educational level: College or higher	0.8086	0.0245	32.9665
Gender: Male	−0.1573	0.0140	−11.1961
Marital status: Divorced or separated	−0.0754	0.0281	−2.6797

Table A.1 (Continued)

Coefficients	Value	Standard error	t-Value
Marital status: Widowed	−0.2211	0.0325	−6.8105
Marital status: Married	−0.1621	0.0188	−8.6443
Income: Below median	−0.1681	0.0155	−10.8621
White: Yes	0.1464	0.0214	6.8346
Urban: Yes	0.1072	0.0157	6.8339
Highbrow taste: Yes × Lowbrow distaste: Yes	1.1276	0.2261	4.9883
Period: 1992 × Highbrow taste: Yes	0.3251	0.2462	1.3205
Period: 2002 × Highbrow taste: Yes	0.5024	0.2338	2.1491
Period: 1992 × Lowbrow distaste: Yes	−0.3647	0.0365	−9.9950
Period: 2002 × Lowbrow distaste: Yes	−0.2094	0.0359	−5.8320
Period: 1992 × Gender: Male	0.0560	0.0200	2.8009
Period: 2002 × Gender: Male	−0.0036	0.0204	−0.1745
Period: 1992 × Urban: Yes	−0.0755	0.0219	−3.4547
Period: 2002 × Urban: Yes	0.0378	0.0230	1.6431
Period: 1992 × Educational level: Some upper secondary	−0.0112	0.0382	−0.2927
Period: 2002 × Educational level: Some upper secondary	−0.0402	0.0489	−0.8210
Period: 1992 × Educational level: Upper secondary	0.0251	0.0332	0.7558
Period: 2002 × Educational level: Upper secondary	−0.0474	0.0416	−1.1404
Period: 1992 × Educational level: College or higher	−0.1759	0.0341	−5.1572
Period: 2002 × Educational level: College or higher	−0.0952	0.0421	−2.2604
Period: 1992 × Income: Below median	0.0757	0.0217	3.4883
Period: 2002 × Income: Below median	−0.1017	0.0224	−4.5361
Period: 1992 × White: Yes	−0.0548	0.0298	−1.8399
Period: 2002 × White: Yes	0.0319	0.0301	1.0615
Period: 1992 × Marital status: Divorced or separated	0.1053	0.0383	2.7455
Period: 2002 × Marital status: Divorced or separated	0.0207	0.0375	0.5523
Period: 1992 × Marital status: Widowed	0.2061	0.0431	4.7797
Period: 2002 × Marital status: Widowed	0.0772	0.0440	1.7529
Period: 1992 × Marital status: Married	0.1673	0.0248	6.7464
Period: 2002 × Marital status: Married	0.0765	0.0262	2.9222
Period: 1992 × Highbrow taste: Yes × Lowbrow distaste: Yes	0.2819	0.2833	0.9953
Period: 2002 × Highbrow taste: Yes × Lowbrow distaste: Yes	0.0747	0.2734	0.2732

^a This study used the resistant linear model function of MASS package (see Venables and Ripley, 1999), implemented on the R language and environment for statistical computing, R-Development-Core-Team, 2004 version 2.0.0.

References

- Becker, H., 2004. Jazz places. In: Bennet, A., Peterson, R.A. (Eds.), *Music Scenes: Local, Translocal, and Virtual*. Vanderbilt University Press, Nashville, pp. 17–27.
- Bernstein, B., 1977. *Class, Codes and Control*. Routledge and Kegan Paul, London.
- Bihagen, E., Katz-Gerro, T., 2000. Culture consumption in Sweden: the stability of gender differences. *Poetics* 27 (5–6), 327–349.
- Birkelund, G.E., Goodman, L.A., Rose, D., 1996. The latent structure of job characteristics of men and women. *American Journal of Sociology* 102 (1), 80–113.
- Bourdieu, P., 1998. [1979]. *La distinción: Criterio y bases sociales del gusto*. Taurus, Madrid.
- Bryson, B., 1996. Anything but heavy metal: symbolic exclusion and musical dislikes. *American Sociological Review* 61, 884–899.
- Bryson, B., 1997. What about the univores: musical dislikes and group-based identity construction among Americans with low levels of education. *Poetics* 25, 141–156.
- Clogg, C.C., Goodman, L.A., 1984. Latent structure analysis of a set of multidimensional contingency tables. *Journal of the American Statistical Association* 79, 762–771.

- Csikszentmihalyi, M., 1988. The flow experience and its significance for human psychology. In: Csikszentmihalyi, M., Csikszentmihalyi, I.S. (Eds.), *Optimal Experience: Psychological Studies of Flow in Consciousness*. Cambridge University Press, Cambridge, pp. 15–35.
- DiMaggio, P., 1987. Classification in art. *American Sociological Review* 52, 440–455.
- DiMaggio, P., Mukhtar, T., 2004. Arts participation as cultural capital in the United States, 1982–2002: signs of decline? *Poetics* 32, 169–194.
- Douglas, M., Isherwood, B., 1996. [1979]. *The World of Goods: Towards an Anthropology of consumption*. Routledge, London.
- Fox, J., 1987. Effect displays for generalized linear models. *Sociological Methodology* 17, 347–361.
- Fox, J., 2003. Effect displays in R for generalized linear models. *Journal of Statistical Software* 8 (15), 1–27.
- Greenacre, M.J., 1984. *Theory and Applications of Correspondence Analysis*. Academic Press, London.
- Holbrook, M.B., Weiss, M.J., Habick, J., 2002. Disentangling effacement, omnivore, and distinction effects on the consumption. *Marketing Letters* 13 (4), 345–357.
- Holt, D., 1998. Does cultural capital structure American consumption? *Journal of Consumer Research* 25 (1), 1–25.
- Katz-Gerro, T., 2002. Highbrow cultural consumption and class distinction in Italy, Israel, West Germany, Sweden, and the United States. *Social Forces* 81 (1), 207–229.
- Katz-Gerro, T., 2004. Cultural consumption research: review of methodology, theory, and consequence. *International Review of Sociology* 14 (1), 11–29.
- Katz-Gerro, T., in press. Comparative evidence of inequality in cultural preferences: gender, class, and family status. *Sociological Spectrum*.
- Lazarsfeld, P.F., Henry, N.W., 1968. *Latent Structure Analysis*. Houghton Mifflin Company, Boston, MA.
- López-Sintas, J., García-Álvarez, E., 2002. Omnivores show up again: the segmentation of cultural consumers in the Spanish social space. *European Sociological Review* 18 (3), 353–368.
- López-Sintas, J., García-Álvarez, E., 2005. Four characters on the stage playing three games: performing arts consumption in Spain. *Journal of Business Research* 58 (10), 1446–1455.
- López, J., Zerva, K., 2005. Exploring the omnivorousness trend in the musical tastes space. Ninth International Conference on Marketing and Development, 8–11 June. Aristotle University of Thessaloniki and The International Society of Marketing and Development, Thessaloniki, Greece.
- Magidson, J., Vermunt, J.K., 2001. Latent class factor and cluster models, bi-plots, and related graphical displays. In: Sober, M., Becker, M. (Eds.), *Sociological Methodology*, vol. 31. Blackwell Publishers, Boston, pp. 223–264.
- Magidson, J., Vermunt, J.K., 2002. Latent class models for clustering: a Comparison with K-means. *Canadian Journal of Marketing Research* 20, 37–44.
- McCutcheon, A., Mills, C., 1998. Categorical data analysis: log-linear and latent class models. In: Scarbrough, E., Tannenbaum, E. (Eds.), *Research Strategies in the Social Sciences: A Guide to New Approaches*. Oxford University Press, Oxford, pp. 71–94.
- NEA 1985. Survey of public participation in the arts 1982 [computer file]. Bureau of the Census [producer], Washington, DC. National Endowment for the Arts [distributor], Washington, DC.
- NEA 1993. Survey of public participation in the arts 1992 [computer file]. National Endowment for the Arts [producer and distributor], Washington, DC.
- NEA 2003. Survey of public participation in the arts 2002 [computer file]. National Endowment for the Arts [producer and distributor], Washington, DC.
- Nishisato, S., 1994. *Elements of Dual Scaling*. Erlbaum, Hillsdale, NJ.
- Peterson, R.A., 1997. Changing representation of status through taste displays: an introduction. *Poetics* 25, 71–73.
- Peterson, R.A., 2004. Le passage à des goûts omnivores: notions, faits et perspectives. *Sociologie et Sociétés* xxxvi (1), 145–164.
- Peterson, R.A., Kern, R.M., 1996. Changing highbrow taste: from snob to omnivore. *American Sociological Review* 61, 900–907.
- Peterson, R.A., Simkus, A., 1992. How musical tastes mark occupational status groups. In: Lamont, M., Fournier, M. (Eds.), *Cultivating Differences*. University of Chicago Press, Chicago, IL, pp. 152–186.
- R-Development-Core-Team 2004. *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria.
- Rodgers, W.L., 1982a. Estimable functions of ages, period, and cohort effects. *American Sociological Review* 47, 774–787.
- Rodgers, W.L., 1982b. Reply to comment by Smith, Mason and Fienberg. *American Sociological Review* 47, 793–796.
- Slifkin, R.T., Randolph, R., Ricketts, T.C., 2004. The changing metropolitan designation process and rural America. *The Journal of Rural Health* 20 (1), 1–6.

- Smith, H.L., Mason, W.M., Fienberg, S.E., 1982. Estimable functions of age, period, and cohort effects: more chimeras of the age-period-cohort accounting framework: Comment to Rodgers. *American Sociological Review* 47, 787–793.
- van Eijck, K., van Rees, K., 2000. Media orientation and media use: television viewing behaviour of specific reader types from 1975 to 1995. *Communication Research* 27 (5), 574–616.
- van Rees, K., Vermunt, J., Verboord, M., 1999. Cultural classification under discussion—latent class analysis of highbrow and lowbrow reading. *Poetics* 26, 349–365.
- Venables, W.N., Ripley, B.D., 1999. *Modern Applied Statistics with S-Plus*. Springer-Verlag, New York.
- Vermunt, J., Magidson, J., 2000. *LatentGold: User's Guide*. Statistical Innovations, Belmont, MA, 2000.
- White, H., White, C., 1993. *Canvases and Careers: Institutional Change in the French Painting World*. University of Chicago Press, Chicago, IL.

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