

DISTINCTION IN BRITAIN, 2001–2004? Unpacking homology and the ‘aesthetics’ of the popular class

Gindo Tampubolon

Centre for Research on Socio-Cultural Change, University of Manchester, 178 Waterloo Place, Oxford Road, Manchester M13 9PL, UK

ABSTRACT: This study delineates a scheme for examining Bourdieu's theory which relates social structure and cultural consumption (the homology thesis). Interpreting homology as the exclusive mapping between the space of cultural consumptions and social structure e.g., ‘high’ art as the exclusive domain of the upper class, is inadequate. Bourdieu's theory allows a more refined scheme which incorporates habitus. I elaborate this scheme and derive some propositions regarding the pattern of music consumptions and social structure. A Multiple Indicator Multiple Cause model is used to examine the homology thesis directly; where in the measurement part, a latent class model is used to derive types of consumers (or space of cultural consumption), and simultaneously, in the structural part, a logistic model is used to estimate stratification effects of being in one of the types. Using survey data sponsored by Arts Council England, it is shown that the space of music consumptions is inhabited by two types of music consumers: the popular and the dominant class. Furthermore, this space is shown to be structured by social class thereby lending some support to the homology thesis.

Key words: homology; habitus; social class; cultural consumption

1. Introduction

Music is the *locus classicus* of the theorising of cultural consumption. Bourdieu claims that musical taste manifests the exercise of symbolic capital of the dominant class in everyday life. The proposition that the social structure and the space of cultural consumptions are homologous is certainly one of the richest and most appealing theories of cultural consumption.

A related argument relating cultural consumption and social stratification is widely invoked in the debate about omnivorousness (DiMaggio 1987; Bryson 1996; Peterson and Kern 1996; Warde *et al.* 2000). The argument posits that there are a group of people with a wide range of musical tastes which effectively dilute the influence of social structure on cultural consumption. DiMaggio proposes that 'the number of genres that a person consume is a function of his or her socioeconomic status' (1987: 444). In another setting DiMaggio and Useem (1987) suggest that education, class compatibility and other aspects of cultural capital such as family upbringing also contribute to the pattern of consumptions of 'high' art.

Many scholars have been taken up by the potential and power of Bourdieu's claims and examined the experiences in societies other than where the claims were originally formulated, i.e., France in the 1960–1970s. Many have turned into critics, finding faults or temporal limits to his formulation. For an attempted recovery in the face of these critics, see Holt (1997).

Sweeping changes in the landscape of cultural production and consumption have produced cultural products and processes unrecognised three decades ago. It is perhaps timely to revisit Bourdieu's claims about the relation between social structure and the space of cultural consumption, i.e., the homology thesis. With the music industry in robust health (Recording Industry Association of America 2005), new gadgets such as iPod as the new must-have and advanced infrastructure in the West (think of the Web as almost ubiquitous, potentially leading to 'music on tap'; music download overtook high-street sales in terms of units in the UK for the first time this year), an interesting question presents itself: does taste in music continue to be socially structured, and what does the social space look like?

The aim of this paper is to show that despite claims to the contrary (e.g., Chan and Goldthorpe 2007), social position contributes to structure the space of cultural consumption, thus echoing Bourdieu's claims. Another aim is to begin to examine his claim using survey data about the 'aesthetic' of the dominated or popular class, i.e., that it is often expressed in a contradictory way. A full investigation capable of examining the homology thesis requires us to estimate the effects of different modes of appropriation. Although the data analysed here are not rich enough to arrive at conclusive proof, an attempt is made using data on attitude or judgment regarding visits to art galleries. In this way we may have a beginning of evidence regarding the 'aesthetic' of the popular class. The use of judgment regarding visit to *art galleries* in the explanation of the structuring of *musical* taste, a quite different consumption domain, will be justified using the notion of habitus later.

This paper moves towards these aims by first suggesting an alternative scheme for understanding the relation between social structure and space of consumption by revisiting Bourdieu's *Distinction* briefly. Having delineated this scheme which is suitable for the hypothesis generation, it is then used to examine whether social structure is evidently homologous with the space of cultural consumption. In elaborating on this alternative scheme I suggest a derivation of relation between what Bourdieu called, 'conditions of existence, habitus' and lifestyle (Bourdieu 1979/2004: 171).¹

Apart from these theoretical points, this paper also highlights a methodological point (local dependence in latent class analysis) which might be useful to consider in other investigations on the relations between social structure and space of consumption.²

This paper focuses on music consumption. Some have argued, e.g., van Rees *et al.* (1999), that the homology thesis can only reasonably be tested on all domains of cultural consumption, not just on a particular domain such as music. However, Bourdieu's theory, especially on the role of habitus, opens up the possibility for empirical work to be conducted on a particular domain and yet making use of judgment or evaluative statements from different consumption domain. I shall elaborate more on this possibility in formulating a hypothesis on the expression of aesthetic judgments. In any case, music is the classic locus for this kind of investigation. Furthermore, there are many examples motivated by pragmatism rather than theory where a particular domain is the focus, such as van Rees *et al.* (1999) itself. For a recent exception see Sintas and Álvarez (2004) who investigate the domains of music, dance and theatre.

The paper is structured as follows. Section 2 revisits the homology thesis in order to formulate hypotheses to investigate patterns of

1. In inductively deriving this scheme, I am conscious of distorting Bourdieu's approach. Specifically, Bourdieu starts not with some aggregation of occupations, i.e., social class, because for him this entails an a priori boundary setting. He captures the starting points from individual occupations themselves. See Weininger (2005) on this point. I start with social class in the spirit of engagement with Bourdieu's critics which often start with social class and hope that this distortion is acceptable.
2. In using latent class analysis coupled with logistic regression, this paper tries to build a half-way house between those sympathetic to Bourdieu's theories or methods and his critics. It is well known that Bourdieu chose correspondence analysis mixed with creative interpretive study based on fundamental insight that social phenomena are relational and correspondence analysis serves this view well. Some have criticised him also on this choice of method. Or, some have argued that Bourdieu's conclusions do not stand up to scrutiny and used other methods to bolster their case (e.g., Chan and Goldthorpe, 2004, which use latent class analysis). I hope that by using latent class analysis which is equivalent under certain conditions with correspondence analysis, a middle way is built.

consumption and their relationship with social class and socio-demographic variables. Section 3 describes the data and methodology. Section 4 presents results and discussion. Section 5 concludes.

2. Alternative scheme to investigate homology

There have been many attempts to examine Bourdieu's thesis and more generally, relations between social structure and cultural consumption, e.g., in contemporary Britain (Warde *et al.* 2000; Chan and Goldthorpe 2004), France (Coulangeon 2003), Spain (Sintas and Álvarez 2002, 2004), Holland (van Rees *et al.* 1999) and North America (e.g., Peterson and Simkus 1992; Bryson 1996; Peterson and Kern 1996; Holt 1997; Relish 1997). Most found that an alternative explanation to that claimed by Bourdieu, such as omnivorousness (e.g., Peterson and Simkus 1992), is more appropriate. However, according to Holt (1997), critics of Bourdieu have applied a restrictive interpretation or a misinterpretation of Bourdieu's theory. An adequate scheme to investigate this is proposed after the discussion about how the theory has been construed in previous empirical studies.

Holt (1997: 100) notes that Bourdieu's theory of taste is

a set of sensitizing propositions concerning the relations between social conditions, taste, fields of consumption and social reproduction that must be specified in each application to account for the particular configuration of these schemes.

Hence, it is inappropriate in Holt's view to operationalize an exclusive, rank ordered relation between social structure and space of cultural consumption. A scheme for this exclusive relation is given in Figure 1, left panel. An example of such an exclusive scheme is given by Halle (1993: 8), quoted in Holt (*ibid.*) 'two fundamental tastes in modern society: the taste for high culture, which is associated with the dominant classes, and the taste for popular culture, which is associated with the dominated classes'. In another instance, Bryson (1996: 886) suggests 'Bourdieu's perspective, then, expects high-status individuals to be the most culturally exclusive. That is, they distinguish themselves with an exclusive culture that rejects the cultural patterns and tastes of other groups'. More recently, Chan and Goldthorpe (2004: 11) write 'there is little evidence to be found for the existence of a musical elite, at least in the sense of a group who, while actively expressing 'high' musical taste, at the same time reject more popular musical forms'.

Another important misunderstanding of the homology thesis arises from placing emphasis on signifying objects and moving away from the importance of signifying practice which is the focus of Bourdieu all along

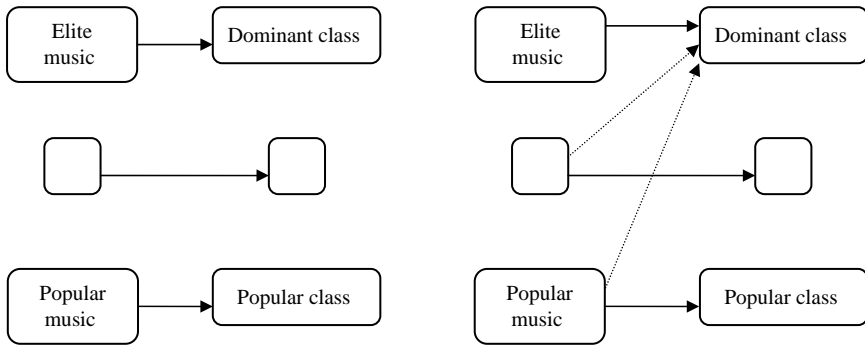


Figure 1. Homology schemes in the domain of music consumption. Left: exclusive scheme and right: ‘appropriation’ scheme. Note the different type of links in the ‘appropriation’ scheme, signifying the different mode of appropriating/appreciating the same objects

(Holt 1997). Although different cultural objects embody different amounts of cultural capital, it is only in the practice of consumption of those objects that social structure is expressed. In other words, even though the objects consumed are the same, the modes of appreciation or appropriation are different according to the social structure. Two quotes from *Distinction* may help here. First, about the popular or working class aesthetic (Bourdieu 1984: 41, my emphasis):

It must never be forgotten that the working-class ‘aesthetic’ is a dominated ‘aesthetic’ which is constantly obliged to define itself in terms of the dominant aesthetics. The members of the working class, who can neither ignore the high-art aesthetic, which denounces their own ‘aesthetic’, nor abandon their socially conditioned inclinations, but still less proclaim them and legitimate them, often experience their relationship to the aesthetic norms in a twofold and *contradictory* way. This is seen when some manual workers grant ‘pure’ photographs a purely verbal recognition . . . : ‘It’s beautiful, but it would never occur to me to take a picture of a thing like that’, ‘Yes, it’s beautiful, but . . . it’s not my cup of tea’.

We should be able to get a sense of the ‘aesthetics’ of the dominated class by looking at what constitutes their pattern of consumption. I suggest they are mainly negatives or expressed in a contradictory way rather than positives. Even in the absence of direct questions about attitudes of music consumption, expressed for instance in terms of dislikes, the pattern of music consumption of the dominated class are mainly ‘No’ rather than ‘Yes’.

Second, about the dominant or upper class aesthetic (ibid: 40, my emphasis):

Thus, nothing more rigorously distinguishes the different classes than the disposition objectively demanded by the legitimate consumption of legitimate works, . . . and the even rarer *capacity to constitute aesthetically objects that are ordinary or even 'common'* (because they are appropriated . . . by the 'common people') or to apply the principles of a *'pure' aesthetic in the most everyday choices* of everyday life.

Here, I would like to quote a recent comment in the *Guardian* by John Woolrich, a composer and associate artistic director of the Aldeburgh Festival, which arguably strikingly echoes the last quote (Woolrich 2005, my emphasis).

Categories of music – popular, traditional, modernist, experimental – have broken down. There's no need to fear the unknown.

There was a wonderful maverick composer called Henry Cowell who had an experimental imagination and expanded the range of things music could do. He tried playing inside the piano and discovered that he could make beautiful or frightening sounds by striking and plucking the strings. Other discoveries influenced Bartok. He was also an influential teacher and, not surprisingly, two of his pupils turned out to be experimental composers: John Cage and Lou Harrison. Other pupils included George Gershwin and Burt Bacharach.

I've always loved that – the same man taught the composers of *24 Hours From Tulsa* and *4'33"*. *It shows how all music ties together. Categories of what is popular, what is traditional, and what is modernist or experimental break down the minute you give it any thought.*

The recent quote from Woolrich above echoed Bourdieu in the sense that what Bourdieu calls 'the application of pure aesthetic' found resonance in the expression 'the minute you give it any thought'.

Now we are in a position to compare the scheme often used in previous empirical works and a new scheme, based on the differential mode of appropriation, which emphasizes the mode of appropriation as opposed to the object and which recognises the possibility of the dominant class appropriating 'common' object in addition to legitimate works. The two schemes are given in Figure 1. A complementary basis to justify this alternative scheme is made with reference to habitus later.

2.1. Hypotheses on genres of music consumed

The 'appropriation' scheme on the right panel of Figure 1, as opposed to the exclusive or rank ordered scheme on the left, gives rise to the hypothesis that

controlling for other covariates, social class has an effect on the position of individuals in the social space of consumption. The higher the social class of an individual, the more likely (s)he is to be found in the position that consumes more 'elite' genre of music and that consumes wider genre of music including the 'popular'.

This hypothesis begins to suggest a richer relationship between social class and cultural consumption than that suggested by the omnivorousness thesis (Peterson and Kern 1996; Warde *et al.* 2000; Sintas and Alvarez 2002).³ In itself, this hypothesis cannot strongly differentiate between homology and omnivorousness as the theory of consumption.⁴ Differentiating between the two hypotheses requires systematic evidence about 'modes' of appropriation. To emphasise, the consumption of 'common' objects by the popular and the dominant classes happen using different modes.⁵ In fact, the popular 'aesthetics' is expressed in a contradictory way. The notion of different modes of appropriation is theorized in Bourdieu's concept of habitus, to which I now turn.

2.2. Habitus and a window into modes of appropriation across domains

While formulating the following hypothesis, I shall also argue for the theoretical as opposed to merely pragmatic possibility of conducting a study on homology focusing on only one domain of consumption. Recall Van Rees *et al.* (1999) who argue that, strictly speaking, the homology thesis can only be tested if all domains of consumption are simultaneously analysed. This perhaps arises from an incomplete understanding of

3. This hypothesis, therefore, excludes the idea that musical consumption is an act, predominantly, of self-expression as suggested by some strong version of postmodern theories.
4. I agree with an anonymous reviewer that there is a potential for misunderstanding the omnivorousness thesis here. Both the omnivorousness thesis and Bourdieu's homology thesis accommodate different modes of appropriation. However, arguably, the omnivorousness thesis did not go as far as Bourdieu's homology thesis in theorising the nature and source of these different modes which is to be found in Bourdieu's concept of habitus. I chose, therefore, to couch this study predominantly in terms of Bourdieu's homology thesis while acknowledging the point above and repeat the acknowledgement later on as I discuss the empirical evidence in Section 4.3.
5. Following the examples of others who have examined this issue (e.g., Sintas and Álvarez 2002, 2004 and Chan and Goldthorpe 2004) I expect to find a small number of classes of consumers. Chan and Goldthorpe (2004) found three and Sintas and Álvarez (2004) found four. The numbers finally arrived at is selected using standard information criteria. Please see the above references for examples.

Bourdieu's theory, especially his notion of habitus. In the following, I recount suggestion that habitus allows judgment in one domain of consumption to be transferred to another domain or to be used in understanding consumption in the other domain. This transferred judgment may be an inadequate substitute for direct judgment in the domain of concern, music in this case, however this transfer is still consistent with Bourdieu's theory.

A rather extended quote from Bourdieu (1979/2004: 170, my emphasis) shall serve to emphasise the homology thesis and the essential role of habitus.

The habitus is both the generative principle of . . . judgements and the system of classification of these practices . . . relationship that is actually established between the pertinent characteristics of *economic and social condition and the distinctive features associated with the corresponding position in the universe of lifestyle* only becomes intelligible when the habitus is constructed as the generative formula . . . When one speaks of the pretension on the petite bourgeoisie, one is not only describing these groups by . . . the most important of their properties, but also endeavouring to name the *principle which generates all their judgements*. . . The habitus is a disposition that generates meaningful practices; it is a general, *transposable* disposition which carries out a systematic, universal application

Based on the second emphasis above one can argue that through habitus, modes of appropriation across different domains of consumption such as music and art galleries display a coherent semantic unity. Equally, the mode of appropriation in one domain, such as museums or art galleries, is transposable to another domain such as music. Figures 1 and 2 especially bring out, in essence, the different mode of appropriations across different classes (note different arrows emanating from an art form) and the unified mode of appropriations across different domains (note the similar arrows to habitus).

Comparing Figures 1 and 2 for instance we can see that one can understand the mode of appropriation of music by understanding the mode of appropriation in other domains. In this particular case, I shall borrow from the domain of consumption of art galleries. This is because examples of judgments by the dominant and petite bourgeoisie classes on consumptions of museum and art galleries are reported in Bourdieu (1979/2004). Fortunately, and in parallel, our data contain attitudes or judgments toward consumption of art galleries.

I suggest above that there is a difference in the mode of appropriation between the dominant class and the popular class. I repeat this in a refined schema in Figure 2 where habitus which links consumption in different

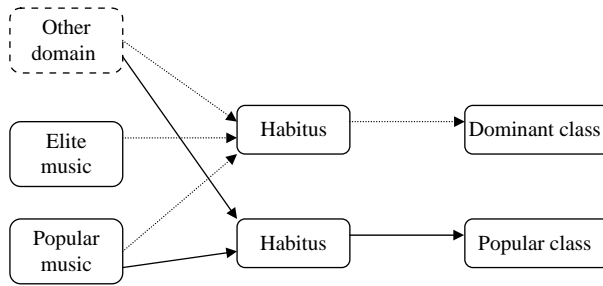


Figure 2. Homology scheme across many domains of consumption delineating the role of habitus

domains is particularly emphasised. The mode of appropriation of music is but one expression of a ‘subjective system of dispositions (that is, habitus) whose “expression” across multiple domains of consumption confers a semantic unity on the practices that warrants reference to coherent “lifestyles”’ (Weininger 2005: 95, my emphasis). Habitus as a generative principle which provides a semantic unity to different judgments allows us to transfer meaning or judgment across domains (see Weininger 2005: 93–95).

Before presenting quotes from *Distinction* as evidence of this principle of judgment or ‘habitus in action’ I shall briefly note on Bourdieu’s method when analysing habitus. Weininger (2005: 93) notes that

because the habitus, as a system of dispositional ‘schemes’, cannot be directly observed, it must be apprehended interpretively. Much of *Distinction* is therefore devoted to a qualitative study of the various preferences and practices which cluster in each sector of social space in order to identify the particular ‘scheme’ or ‘principle’ that underlies them.

The data analysed here, being survey results, do not allow qualitative or interpretive study of this kind. However, as mentioned above, we can make use of questions on attitude regarding visits to museums or art galleries.⁶

6. Incidentally, interpretive study of the kind used by Bourdieu is applied with the primary aim to analyse the dynamics of classification struggle; see Weininger (2005). The use of latent class analysis which is designed to uncover latent structure (Lazarsfeld 1950) goes some way into probing this dynamic using available survey data. Quantitative data alone, of course, will not allow us to do full analysis of the dynamics.

Now, what do judgements of members of the dominant and others look like in Bourdieu's time? Bourdieu (1979/2004: 272, 273, 276) furnishes two examples. First by a member of the dominant class, a lawyer whose family belong to the Parisian *grande bourgeoisie* (Bourdieu 2004/1979: 276ff):

On the other hand, he readily confesses to having spent 'many hours in museum, for the pleasure of it, in Holland and Italy'. He was 'very struck, educated, by Italian painting . . .'. He is also 'very responsive to Dutch painting because of its character'.

Contrast this with the judgment of an engineer (Bourdieu 2004/1979: 272ff, my emphases):

Behind the obligatory exaltation of the austere severity of the museum and the 'meditation' it encourages, there are sometimes glimpses of the true nature of the visit – an always somewhat laborious task which the devotees set themselves and duly perform with methodical determination, *rewarded as much by the sense of a duty done as by the immediate pleasure of contemplation*. 'The museum left me with an impression of silence. Emptiness, too, but perhaps because of the silence. That helps you concentrate on the works, helps them sink into you. I wasn't bowled over by it, it's very tedious. Looking at everything systematically is tiring. It was a self-imposed discipline. It's *constraining* and you get *indigestion*. I think I got through it quickly because I wanted to be able to tell myself I'd done that museum. It was very monotonous, one picture after another. They ought to put something different in between the paintings to break it up a bit'.

Note the different emphases put in these two contrasting quotes. In the latter, note the negative phrases such as *constraining* or *indigestion*. It is perhaps not too far from the judgment recorded in our data regarding art gallery visits: 'I would feel out of place in a museum or art gallery'.

It is now possible to formulate a hypothesis regarding the different modes of appropriation:

the judgments on consumption of art galleries or museums given by the popular class is significantly different from those by the dominant class. Furthermore, those judgments will be predominantly expressed negatively by the popular class.

To summarise all the hypotheses so far, we should see that the dominant class consumes a wider range of musical genres, not limited to elite music. The popular class, on the other hand, are likely to consume a narrower range of musical genres. In addition, their aesthetics are often expressed in

a contradictory way. When both the dominant class and the popular class consume the same popular or 'common' music, their mode of appropriation are different. According to Bourdieu, the dominant class apply a 'pure' aesthetic mode, or as echoed by Woolrich above, they apply 'a minute of thought'. The elaboration of the space of consumption is discussed next.

2.3 On the social space of consumption

Most studies which investigate relations between social structure and cultural consumption begin by, in the first stage, examining patterns of consumption. This is done by either counting all expressed tastes toward or consumptions of a set of genres of music (e.g., Bryson 1996; Relish 1997; Warde *et al.* 2000) or applying latent structure models (Lazarsfeld 1950; Lazarsfeld and Henry 1968; Vermunt 1997) to expressed tastes or consumptions (van Rees *et al.* 1999; Sintas and Álvarez 2002; Chan and Goldthorpe 2004). The latent structure model provides a more refined texture of the space of cultural consumption and has much to recommend it.⁷ As such, a latent structure model allows us to see significant homogenous patterns or shared consumption. This latent structure derivation of homogenous pattern of consumption is, of course, at the heart of the method used by Bourdieu in *Distinction*.⁸

At the end of the first stage, for the latent structure model, individuals are assigned the corresponding latent class or position in the space of cultural consumption based on their modal probabilities. This assignment which effectively treats a random variable as an observed variable is not inconsequential but often not reported (van Rees *et al.* 1999, reported one in ten is misclassified; a higher misclassification rate can throw serious doubt on the results).⁹

7. Methods based on counting are relatively deficient because they lump together patterns of consumption with substantive variation. Just imagine two individuals who both likes five genres; one likes ska, house, acid, garage and bhangra; the other likes jazz, classic, opera, musical and world music. Lumping these two individuals together risks serious mistake. Furthermore, there are many combinations of five 'likes' out of the total genres listed in the questionnaire, for instance. These combinations also depends on the total list. In effect, counting is scale variant.

8. It is often alleged that latent class analysis is better at recovering this homogenous pattern of consumption than correspondence analysis used by Bourdieu. However, there has been a long line of works, e.g., Gilula (1983), establishing conditions of equivalence between latent class analysis and correspondence analysis, the latest is van der Heijden *et al.* (1999). The point being both methods are comparable alternatives.

9. Misclassification rate is not the same as goodness of fit often reported in latent class analysis. The two can give contradictory signals. See references later in Discussion.

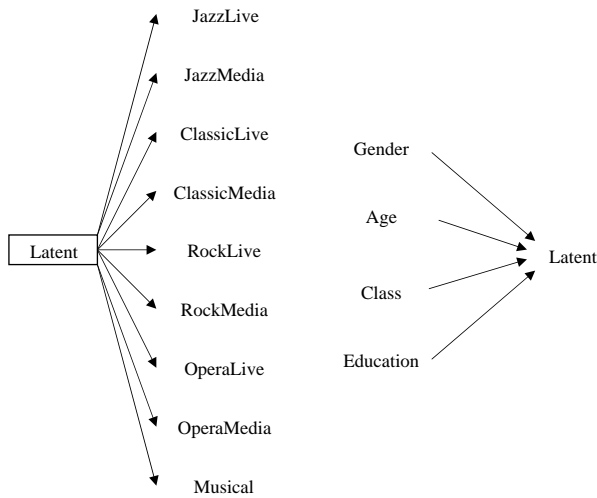


Figure 3. Two-stage approach to investigate the homology thesis. (Left: stage 1 unrestricted latent class for measurement part, right: stage 2 multinomial logistic for structural part.) A box represents latent variable; the latent variable from stage 1 is treated as an observed variable in stage 2. L stands for live event, M stands for via media consumption. Consumption of the same musical genre via live event and via media are treated as not related (independent) required by local independence assumption

In the second stage, a generalised linear model (Nelder and Wedderburn 1972) or a multinomial logistic is usually applied to examine the effects of various stratification and socio-demographic variables on the likelihood of occupying one of the assigned position. By way of example, a summary of these steps is given in Figure 3 as applied by van Rees *et al.* (1999).¹⁰

Apart from the potential bias introduced by treating a random variable as an observed variable, which lead to significant effects found when there is none in the first place, other problems associated with measurement error also inflict this two-stage approach. For more on this issue and solution which amounts to Multiple-Indicator, Multiple-Cause (MIMIC) model see e.g., Skrondal and Rabe-Hesketh (2004: 75ff). These problems are widely recognised by researchers working on this subject and therefore, if possible, they tried to estimate the first stage or measurement part, and the second stage or structural part, simultaneously in a MIMIC model. However, convergence is not often achieved and pragmatism

10. Strictly speaking in the case of van Rees *et al.* (1999), the items are reading items but the features of the model are the same including, crucially, conditional independence of indicators.

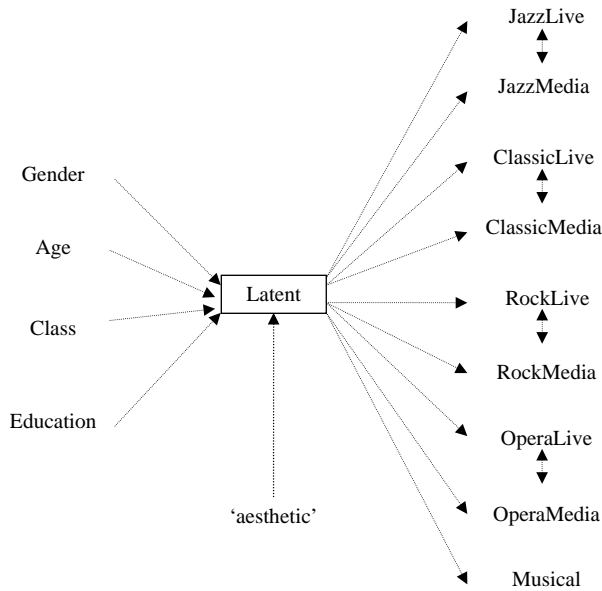


Figure 4. Multiple-indicators, multiple-cause (MIMIC) model of homology consumption. The measurement part is a latent class model with local dependence; simultaneously, the structural part is multinomial logistic regression model. Latent variable in box. L stands for live event, M stands for via media consumption. Consumption of the same musical genre via live event and via media are treated as related (dependent); notice, e.g., the link between JazzM and JazzL, which was absent in Figure 3

usually prevails. This paper, however, attempts to do this and the model estimated is given in Figure 4.

3. Data and methodology

This section discusses the data used in this investigation and methodological points on how to deal with the ubiquitous fact that some responses from individuals are missing. I shall also say a few words about modelling strategy because the familiar goodness of fit measure is not the overarching criteria for model selection.

3.1. Data source

The data are based on the Office of National Statistics Omnibus Survey, Attendance and Participation in the Arts Module, July and September—

November, 2001, which is sponsored by Arts Council England. A total of 7,667 respondents (Bridgwood 2003: 5) were interviewed and data from 6,042 responses (79 per cent response rate) were deposited with the UK Data Archive, www.data-archive.ac.uk. For more on this data please consult Bridgwood *et al.* (2003).

Based on a series of answers to questions of whether or not the respondent consumes different musical genres through different medium (e.g., live concert, CD, TV), a pattern of answers (based on nine responses) for each respondent is derived. A symmetric local dependence latent class analysis is then applied to these patterns to uncover whether there are discrete classes of respondents based on their different consumption patterns. It is worthwhile to elaborate on these questions: the first set is based on the question 'Which events have you visited in the last 12 months'. From these, five binary indicators are derived based on whether these events are Musical, Jazz concert, Opera or operetta, Classical concert or Rock concert. In Figures 3 and 4, they are labelled JazzL for Jazz Live, etc.

Four more responses are derived based on a series of questions such as 'Have you listened to CD, MD, tape or record in the last 4 weeks?' Or 'Have your watched TV/video/DVD in the last 4 weeks?' Based on these questions, four indicators of consumption of Jazz, Opera or operetta, Classical and Rock music via media are derived. In Figures 3 and 4, they are labelled JazzM for Jazz via media, etc. Note that in the questionnaire, rock also covers pop music.

3.2. Latent class analysis

Latent class analysis is a method to of finding underlying types or categories that summarise cross-tabulation of many categorical variables. These underlying types, because they are unobserved, are known as latent classes. In this study, the observed cross-tabulations are made up of cross-tabulations of nine variables of music consumption. The attempt to find underlying categorical variables to summarise manifest categorical variables is akin to factor analysis where the underlying variable is assumed to be continuous and the manifest variables are also continuous. In fact, it is not inaccurate to call latent class analysis as factor analysis for categorical underlying variable and manifest variables. An accessible treatment to latent class analysis can be found in McCutcheon (1987).

The outcome of such latent class analysis, say two or three types or categories, can often be used in subsequent analysis such as logistic regression. Again, this is analogous to common practice in studies involving factor analysis where the (derived) continuous factor is used in

subsequent analysis such as linear regression. When these two steps are combined simultaneously, i.e., deriving underlying types and logistic regression, or in the continuous case, deriving continuous factor via factor analysis and linear regression, then the method is known as multiple-indicators multiple-causes model (MIMIC). The former (multiple-indicators) refers to the latent class or factor analysis and the latter (multiple-causes) refers to the logistic or linear regression. In this study, independent variables involved in the logistic regression consist of age, gender, social class and education. A recent treatment of this model and other related models is given in Vermunt (1997).

The main non-standard feature of this data is the potential violation of the fundamental assumption of latent class analysis, that of local independence (Lazarsfeld and Henry 1968) because the indicators are likely to be related or dependent. It is entirely plausible that those who attended live jazz concerts in the last 12 months are likely to have listened to jazz music through CD, DVD or watched TV of jazz performance over the last 4 weeks. Like-wise, those who consumed a musical genre through the media over the last 4 weeks are likely to have attended a concert of that same musical genre over the last 12 months. Live music and media music consumption are therefore symmetrically and locally dependent (Hagenaars 1990: 126ff; Vermunt 1997: 57).

The violation of local dependence manifests itself in latent class inflation where many more latent classes than actually the case are found. It is possible that once symmetric local dependence is modelled, the true number of latent classes can be discovered.

One final note on method follows. Although much has been written about the danger of removing observations with missing data (Little and Rubin 2002), and despite recent statistical developments to deal with this ubiquitous problem, many empirical studies still proceed ignoring the serious implications. These include bias, theoretically suitable variables being dropped, and waste of collected information. Here, estimation is done with different starting values in IEM which implements EM algorithm (Vermunt 1997) and the code is given at the appendix.

3.3. On strategy of modelling

It is useful to recap the aim of this paper which is to look at the relationship between social class and the space of cultural consumption as delineated by people's consumption patterns; and to estimate the strength of this relationship. At some point when we have to choose between a model, this aim will exercise priority. The relevance is this: latent class models used in deriving space of consumption must be assessed on its

goodness of fit, often with BIC (Raftery 1996). However, latent class models also give a misclassification rate which does not always agree with this criterion. This rate indicates the severity of the 'identification problems' mentioned in Section 4. When the situation arises that BIC suggests three rather than two latent classes, and misclassification rates contradict this by suggesting two rather than three latent class, I would look further into the magnitude of the misclassification rate. The rule of thumb applied is this, if the misclassification rate is higher than 10 per cent then it is to be avoided. Intuitively, if the misclassification rate is, say, 20 per cent, this amounts to analysing a data set where the data collector has inadvertently jumbled one in five of the responses without telling us about it except that it is jumbled. In this case, results of the analysis must be taken with great caution or the misclassification rate be minimised or better yet, misclassification be avoided altogether. This is the reason why the misclassification rate should feed into the decision on model choice.

The methodological points can be summarised as follows. The analysis of the ACE data is done incorporating three major points. First, symmetric local dependence latent class analysis is used. Secondly, the effect of covariates is simultaneously estimated leading to the use of MIMIC model. Schematically, the estimation is presented in Figure 4. At this point my interest is limited to a few stratification effects on consumption, therefore social class as measured by the NS 5 analytic classes, age (below or above 25 years of age), education (degree education or not) and gender are included. Third, the analysis does not waste observations with any missing response and therefore potential bias is avoided. Both EM algorithm and multiple imputation procedure are used to assess the robustness of the results.

4. Results and discussion

This section proceeds by estimating a MIMIC model. The measurement part of it is a symmetric local dependence latent class model which is then compared with an unrestricted latent class model (a model often used in this literature). This comparison allows pertinent points to be noted along the way. Then it presents results of the structural part of the MIMIC model, where the effect of stratification on the likelihood of being in one of the derived class is presented. I mentioned two different approaches to use all observations when there are missing data, that is EM algorithm and multiple imputation (Little and Rubin 2002) procedure.¹¹ The strong

11. To give an idea of the scale of the problem of missing data in this case, complete case analysis would have reduced the data to 86 per cent of its original sample.

similarity of the results from these two approaches bears witness to the robustness of the result.

4.1. How many classes are there?

Results from unrestricted latent class analysis contrasted with local dependence latent class analysis are presented in Table 1.

In an unrestricted latent class analysis, from column labelled BIC (column 4) on Table 1, five class should be chosen because it has the lowest BIC value corresponding to the best fit model (Raftery 1996). However, I argue above that the indicators are likely to be dependent because consumption of a particular genre of music via the media such as TV is likely to be related to the consumption of the same genre via live event. This dependence can manifest itself in inflation of the number of latent classes. Incorporating local dependence is likely to reduce the number of latent classes estimated.

The last column on Table 1 shows that with local dependence latent class, two classes are enough to have a good fit (-3273.38) comparable to five classes (-3280.58) as before. Furthermore, two classes with local dependence have less than half the number of parameters (24 parameters) to be estimated and interpreted than the number of parameters of five classes (50 parameters) in unrestricted latent classes. More importantly, however, when the assignment of individuals into their modal classes is used in the second stage of some other analysis, another measure to complement goodness of fit must also be considered. With five latent classes one in four of individuals are misclassified compared with only less than one in ten for two classes local dependence latent class.¹² In summary, goodness of fit, ease of interpretation, fitness for further analysis all suggest that two classes of local dependence fit the data.

4.2. The dominant and popular classes

Before going on to describe the simultaneous estimate of the effects of stratification variables on these latent classes, we must answer the questions: what are these latent classes? What are the patterns of their

12. It is worth noting that goodness of fit is not straightforwardly related to classification rate; model with better fit might produce higher misclassification (Steiger and Schoenemann 1978; Steiger 1979a, b; Hagenaars 1990: 115). When employing two-stage procedures, therefore, misclassification rates must also be compared in addition to goodness of fit. There is no mechanical way of choosing the correct model.

TABLE 1. Unrestricted and local dependence latent class analysis. Local dependence improves results in terms of fit, parsimony and misclassification rate

Classes	Unrestricted			Local dependence		
	Params.	BIC	Misclassification rate, percent	Params.	BIC	Misclassification rate, percent
2	20	-2991.65	8	24	-3273.38	8
3	30	-3117.45	19	34	-3399.06	12
4	40	-3197.97	26			
5	50	-3280.58	28			

music consumption? The latent classes and the consumption of various musical genres for each class are given in Table 2.

Table 2 shows that two-thirds of the population belong to the 'popular' class (column one) and the smaller one (34 per cent) belong to the 'dominant' class. Among the popular class, 93 per cent like to consume rock and pop music through the media, therefore only 7 (100-93) per cent do not like to do so. And this high proportion who choose this means is higher still than members of the dominant class, who also liked to consume rock music through the media. The dominant class is clearly distinguished by their wide range of consumption. This smaller portion of the population enjoys listening to or attending concerts of classical music and also enjoys, secondly, rock and pop music. As to the uses of their disposable income, among members of this group almost half spend their money on going to musicals. Although only one-third of the dominant class choose to attend live classic concerts (the other two-thirds do not do so), it is the highest difference in proportion between the two classes with only a tiny one percent of the popular class attending classical concerts.

To summarise the constituent tastes of the dominant and popular classes, I list them next. The popular class tends to not attend live rock concert, jazz concert, opera, classical concert, and musical. They tend to

TABLE 2. Pattern of music consumption in Britain in terms of consuming genres of music (percent). MIMIC model measurement part: latent class assignment

	Popular (66)		Dominant (34)	
	Media	Live	Media	Live
Rock	93	25	85	28
Classic	34	1	97	33
Opera	2	1	47	19
Jazz	14	2	52	17
Musical		19		46

listen to rock and pop music; and tend not to listen to jazz, opera and classical music. The dominant class, on the other hand, tends to go to rock concert, musical, jazz concert, opera and classical concert. They also tend not to listen to rock music but listen to classical music, jazz and opera. These two classes or categories are then used as the dependent variable in examining who are the members of the dominant class (relative to the popular class). Findings from this examination, which relates to the main aim of this paper, are presented next.

4.3. Homology in music consumption

This study is motivated by the question: is there homology between social structure and the space of music consumption in contemporary England? The answer to this question must come in two parts.

To repeat, the first part to the answer must be the finding that there are two classes or types of musical consumers as is shown above. Equivalently, the space of music consumption is made up of two positions that can be labelled dominant and popular. Furthermore, the pattern of consumptions of the dominant class is characterized by broad coverage including those genres that are also consumed by the popular class. Indeed, the elite in society consume 'elite' objects but also 'common' objects. As evidence on judgment of museum visits shows later, the nature of appropriation is different from the way the 'dominated' class appropriate the same 'common' object.

The second part of the answer relates to whether social class still structures cultural or music consumption. The answer is affirmative. This finding supports the first hypothesis formulated above. The estimated equation for membership in the dominant class is given in Table 3. The odds of female compared to male being in a dominant class, controlling for age (under or over 25), education (degree or not) and social class, does not differ significantly. However, the net effect of social class is very significant ($P < 0.001$). The odds of someone from managerial and professional occupation being in a dominant class is more than four times that of the routine occupation. This is the highest odds. Likewise, the odds of someone from intermediate occupations or small employers are more than one and a half or two and a half, respectively. The odds of someone from lower supervisory occupation compared to routine occupation being in a dominant class is not significantly different from one. The net effect of education is also significant but weaker compared to the effect of social class. On the face of this, of course this is supportive of DiMaggio's (1987: 444) proposition. However, as shown above the pattern of consumption, or the pattern 'loadings', of the popular class still requires explanation.

TABLE 3. Homology of social class and music consumption. Odds being in a dominant class. MIMIC model structural part: logistic regression

<i>Odds</i>		<i>t</i>
Constant	0.206	- 10.196
Female	0.959	- 0.411
Age	2.999	5.927
Education (degree vs. non-degree)	2.490	8.236
Social class: semi-routine/routine occupations as reference		
Manager and professional	4.503	10.315
Intermediate occupations	1.648	2.778
Small employers and own acct.	2.838	4.760
Lower supervisory occupation	1.163	0.639

This result also sheds light on Bourdieu's claim about the 'aesthetic' of the popular class. As listed above, they are predominantly negatives. (In another study of a well-known survey data on musical tastes of Americans (Bryson 1996), I find a group which is defined similarly, i.e., in terms of their *dislikes*.) One complementary and reinforcing evidence to this is given by the attitude towards visits to art galleries¹³ among the popular class compared to the dominant class. When it is included in the model, it shows a highly significant effect ($P < 0.0001$). The odds that someone from the popular class would feel out of place in art galleries is nine times that of someone from the dominant class. This effect is consistent with different mode of appreciation between the dominant and the popular class. This indirect evidence is only admissible (see Section 2.2) if cross-domain transfer of judgment is warranted.

This result is also congruent with Peterson and Kern's (1996) omnivorousness thesis. They put emphasis on the 'way' items of consumption are understood rather than on 'what one consumes' (Peterson and Kern 1996: 904). The mode of appropriation employed by the omnivores (dominant class) or the way omnivores 'mark symbolic boundaries when consuming' a certain genre of music is not by 'identification' but rather 'in the light of some knowledge about it'. This resonates with Woolrich's quote above i.e., 'the moment you give it any thought'.

I recognise the limited strength of this indirect evidence on habitus, however, and call for more elaborate investigations regarding legitimate and 'claimed' aesthetics of both the dominant and popular classes to do justice to the rich expressions of cultural judgment.

To recap the discussion, I start by noting that the MIMIC model allows a direct test of the homology thesis. And in doing this, two important

13. The statement was 'I would feel out of place in an art gallery.' Strongly agree to strongly disagree on a scale of 1 - 7. They are grouped (1-4) and (5-7).

points are uncovered. First, the results above give an affirmative answer to the hypothesis on the homology between social structure and the space of music consumption.

Failure to find effect of social class on cultural consumption (e.g., Chan and Goldthorpe 2004) may stem from the well known deficiency inherent in the two-stage approach when latent class scores are used as proxy in the second stage. As Skrondal and Rabe-Hesketh (2004: 316) noted:

using such constructed scores as proxies for latent variables has been demonstrated to be highly problematic, leading to biased standard errors and often to inconsistent parameter estimates.

Heinen (1996: 12) also noted that: ‘the process of assigning scores to subjects on a latent variable is hampered by both the presence of measurement error and a number of identification problems’. He went on to claim that (ibid, emphasis in original) ‘the relationship between latent variables and some external variables can be explored quite satisfactorily *without* this assignment’. The use of the MIMIC model has shown that the relationship between the space of music consumption and social class is strong indeed.

Second, the estimation of socio-demographic and stratification effects are made possible because all observations, including those with missing responses on some questions, are included.¹⁴

Third, the predominantly negative expression of the ‘aesthetic’ of the popular class and the clear evidence of the wider range of consumption of the middle class and the highly educated together call for further exploration with Bourdieu’s claim as a guide. Such exploration, perhaps, requires qualitative and ethnographic approaches.

These evidences of homology recovered in the original survey conducted in 2001 are striking. I therefore replicate this study on an independent sample collected in later years (September and October 2003 and February 2004) and find that the original conclusion is robust.¹⁵ The replication shows the robustness of the original finding which relates to the dominant and popular classes and the stratified nature of these classes.

14. Two approaches, EM and multiple imputation, to deal with missing data produce results that are comparable. These are available from the author upon request.

15. All data is deposited with the UK Data Archive (www.data-archive.ac.uk). Data was accessed in November 2005. There is also data for November 2003 which I do not use because one question on consumption of jazz music was not asked and hence is not comparable.

5. Conclusion

The results presented in this study paint a picture of homology or correspondence between social structure and music consumption. One limitation of this study may result from the limited scope of music domain. Further studies must strive, if enough observations available, to study all or multiple domains of cultural consumptions. Sintas and Álvarez (2004) for instance do this in the case of Spain where music, theatre and dance domains are studied together.

On reflection, the correspondence of social structure and music consumption in contemporary Britain should not be too surprising to students of comparative stratification. Studies in Breen (2005) document the significant effect of social class on individuals' life chances in contemporary Europe. A further study that needs to be done in the light of the findings here is to examine homology across European countries. This is now possible with the availability of the Eurobarometer survey conducted in the summer of 2001.

This paper is limited in that it uses indirect evidence from the domain of visits to art galleries in interpreting the modes of appropriation in the domain of music consumption. Although almost inevitable in omnibus surveys, this indirect use is justified in terms of habitus which warrants unified semantic judgment to be transferred across domain. However, direct evidence is clearly needed. This is perhaps a worthwhile investigation given the limited evidence of the modes of appropriation in studies of this kind.

Let us go back to the two quotes from *Distinction* and a quote from Woolrich above. The dominant class in *Distinction* display the capacity to apply 'pure' aesthetic in most everyday choices of everyday life. Arguably, that is echoed in the quote by Woolrich: 'all music ties together. Categories break down . . . the minute you give it any thought'. But what echoes might one find from people in the popular class in contemporary Britain which resonate with a quote in *Distinction*: 'It's beautiful, but it's not my cup of tea?' Perhaps, if they have to sit together with us on Woolrich's chosen piece of a performance of John Cage¹⁶ 3'44?, they might say 'It might be music, but it's not my cup of tea'.

16. Here's how a sociologist describes this composition: 'which consist of a pianist sitting at a piano, but not playing, for that length of time, calls attention to all the sounds that go on as an audience sits and listens to . . . to what was there to hear all along, but not listened to because it wasn't "music"' (Becker 1998: 84). Or, as an anonymous reviewer suggests, they might not be as intimidated as me and they might say it is perhaps not music.

Acknowledgements

I thank my colleagues at CRESC for their help during the preparation of this manuscript, especially Alan Warde, Mike Savage and Niamh Moore. Johs Hjelbrekke helped a lot in the early stages, and Li Yao Jun actually got me going. All errors remain my own.

References

- Allison, P. (2002) *Missing Data*, London: Sage.
- Becker, H. (1998) *Tricks of the Trade: How to think about your research while you're doing it*, Chicago, IL: The University of Chicago.
- Bourdieu, P. (1984 [1979]) *Distinction: A Social Critique of the Judgement of Taste*, Trans. R. Nice, London: Routledge.
- Breen, R. (ed.) (2005) *Social Mobility in Europe*, Oxford: Oxford University Press.
- Bryson, B. (1996) ‘“Anything but heavy metal”: Symbolic exclusion and musical dislikes’, *American Sociological Review* 61 (5): 884–99.
- Bye, B. V., Gallicchio, S. J. and Dykacz, J. M. (1989) ‘Multiple-indicator, multiple-cause models for a single latent variable with ordinal indicators’, *Sociological Methods and Research* 13 (40): 487–509.
- Bridgwood, A., Fenn, C., Dust, K., Hutton, L., Skelton, A. and Skinner, M. (2003) ‘Focus on cultural diversity: The arts in England’, London: Arts Council England. Research Report No 34. December. www.arts-council.org.uk
- Chan, T. W. and Goldthorpe, J. H. (2004) ‘Social stratification and cultural consumption: Music in England’, Working Paper. Oxford: Nuffield College.
- Chan, T. W. and Goldthorpe, J. H. (2007) ‘Social stratification and cultural consumption: Music in England’, *European Sociological Review* 23 (1): 1–19.
- Coulangeon, P. (2003) ‘La stratification sociale des goûts musicaux’, *Revue française de sociologie* 44: 3–33.
- Dempster, A. P., Laird, N. M. and Rubin, D. B. (1977) ‘Maximum likelihood from incomplete data via the EM algorithm (with discussion)’, *Journal of the Royal Statistical Society B* 39: 1–38.
- DiMaggio, P. (1987) ‘Classification in art’, *American Sociological Review* 52: 440–55.
- DiMaggio, P. and Useem, M. (1978) ‘Social class and arts consumption’, *Theory and Society* 5: 141–61.
- Gilula, Z. (1983) ‘Latent conditional independence in two-way contingency tables: A diagnostic approach’, *British Journal of Mathematical and Statistical Psychology* 36: 114–22.

- Hagenaars, J. A. (1990) *Categorical Longitudinal Data: Log-linear, Panel, Trend and Cohort Analysis*, London: Sage.
- Halle, D. (1993) *Inside Culture: Art and Class in the American Home*, Chicago, IL: University of Chicago Press.
- Holt, D. B. (1997) 'Distinction in America? Recovering Bourdieu's theory of tastes from its critics', *Poetics* 25: 93–120.
- Horton, N. J. and Lipsitz, S. R. (2001) 'Multiple imputation in practice: Comparison of software packages for regression models with missing variables', *The American Statistician* 55: 244–54.
- Kennickell, A. B. (1998) 'Multiple imputation in the survey of consumer finances', Working Paper. Board of Governors of the Federal Reserve System. Washington, DC.
- Heinen, T. (1993) *Discrete Latent Variable Models*, Tilburg: Tilburg University Press.
- Heinen, T. (1996) *Latent Class and Discrete Latent Trait Models*, London: Sage.
- Lazarsfeld, P. (1950) 'The logical and mathematical foundation of latent structure analysis', in S. A. Stouffer *et al.* (eds), *Measurement and Prediction*, Princeton, NJ: Princeton University Press, pp. 413–472.
- Lazarsfeld, P. and Henry, N. W. (1968) *Latent Structure Analysis*, Boston, MA: Houghton.
- Le Roux, B. and Rouanet, H. (2004) *Geometric Data Analysis: From Correspondence Analysis to Structured Data Analysis*, Dordrecht: Kluwer.
- Little, R. J. A. and Rubin, D. B. (2002) *Statistical Analysis with Missing Data*, Hoboken, NJ: Wiley.
- Nelder, J. A. and Wedderburn, R. W. M. (1972) 'Generalized linear models', *Journal of the Royal Statistical Society-Series A* 135 (3): 370–84.
- Peterson, R. A. (1983) 'Patterns of cultural choice: A prolegomenon', *American Behavioral Scientist* 26 (4): 422–38.
- Peterson, R. A. and Kern, R. M. (1996) 'Changing highbrow taste: From snob to omnivore', *American Sociological Review* 61: 900–7.
- Raftery, A. E. (1996) 'Bayesian model selection in social research', in P. V. Marsden (ed.), *Sociological Methodology*, Oxford: Basil Blackwell, Vol. 25, pp. 111–63.
- Recording Industry Association of America (2005) *2005 Consumer Profile*. Available at www.riaa.com/news/marketingdata/pdf/2005consumerprofile.pdf. Downloaded 28 February 2007.
- Relish, M. (1997) 'It's not all education: network measures as sources of cultural competency', *Poetics* 25 (2–3): 121–39.
- Rubin, D. B. (1987) *Multiple Imputation for Non-response in Surveys*, New York: Wiley.

- Sintas, J. L. and Alvarez, E. G. (2002) 'Omnivores show up again: The segmentation of cultural consumers in Spanish social space', *European Sociological Review* 18 (3): 353–68.
- Sintas, J. L. and Álvarez, E. G. (2004) 'Omnivore versus univore consumption and its symbolic properties: evidence from Spaniards' performing arts attendance', *Poetics* 32: 463–83.
- Skrondal, A. and Laake, P. (2001) 'Regression among factor scores', *Psychometrika* 66: 563–76.
- Skrondal, A. and Rabe-Hesketh, S. (2004) *Generalized Latent Variable Modeling: Multilevel, Longitudinal, and Structural Equation Models*, New York: Chapman & Hall.
- Sobel, M. E. (1983) 'Lifestyle expenditures in contemporary America: Relations between stratification and culture', *American Behavioral Scientist* 26 (4): 521–33.
- Steiger, J. H. (1979a) 'The relationship between external variables and common factors', *Psychometrika* 44: 93–7.
- Steiger, J. H. (1979b) 'Factor indeterminacy in the 1930's and the 1970's: Some interesting parallels', *Psychometrika* 44: 157–67.
- van der Heijden, P. G. M., Gilula, Z. and van der Ark, L. A. (1999) 'An extended study into the relationship between correspondence analysis and latent class analysis', in M. Sobel and M. Becker (eds), *Sociological Methodology* 29: 147–86.
- van Rees, K., Vermunt, J. and Verboord, M. (1999) 'Cultural classifications under discussion: Latent class analysis of highbrow and lowbrow reading', *Poetics* 26: 349–65.
- Vermunt, J. (1997) *Log-Linear Models for Event Histories*, London: Sage.
- Warde, A., Tomlinson, M. and McMeekin, A. (2000) 'Expanding tastes?: Cultural omnivorousness and social change in the UK', CRIC Discussion Paper. No 37. www.cric.ac.uk
- Warde, A., Tampubolon, G. and Savage, M. (2005) 'Recreation, informal social networks and social capital', *Journal of Leisure Research* 4: 402–25.
- Weininger, E. B. (2005) 'Foundations of Pierre Bourdieu's class analysis', in E. O. Wright (ed.), *Approaches to Class Analysis*, Cambridge: Cambridge University Press.
- Woolrich, J. (2005) 'A daunting, teeming diversity', *The Guardian*. Tuesday, 8 February.

Gindo Tampubolon works on issues of social change and social stratification using social network analysis and generalised latent variable models.

Address for correspondence: Gindo Tampubolon, Centre for Research on Socio-Cultural Change, University of Manchester, 178 Waterloo Place,

Oxford Road, Manchester M13 9PL, UK. Tel: + 44 161 275 8992.
 Fax: + 44 161 275 8986. E-mail: tampubolon@manchester.ac.uk

Appendix A. LEM code for MIMIC model with local dependence

```
* ace-localdepend.inp
* Dec 2005
* data: ACE
* sex cls age edu att mro mcl mop mja lro lcl lop lja lmu
* 1 2 3 4 5 6 7 8 9 0 1 2 3 4
*
* Note: there are local maxima; use different sets of
* (random) starting values
*
lat 1
man 13 *9 indicators + 4 covariates
res 1
dim 5 3 2 5 2 2 2 2 2 2 2 2 2 2 2 2 *can change the 1st dimension
lab R X SEX CLS AGE EDU MRO MCL MOP MJA LRO LCL LOP
LJA LMU
mod
  X | SEX.CLS.AGE.EDU {X.SEX, X.CLS, X.AGE, X.EDU}
* MRO | X
* MCL | X
* MOP | X
* MJA | X
  MRO.LRO | X {MRO.LRO, MRO.X, LRO.X}
  MCL.LCL | X {MCL.LCL, MCL.X, LCL.X}
  MOP.LOP | X {MOP.LOP, MOP.X, LOP.X}
  MJA.LJA | X {MJA.LJA, MJA.X, LJA.X}
  LMU | X
rec 6042
mis 0
ski [5]
dat acemusic.txt

see 94321 *seed for random number 12349
ite 20000 *maximum iteration
dum 1 3 1 5 1 2 1 1 1 1 1 1 1 1 1 1 *ref: 'elite', male and routine occ.
* R X SEX CLS AGE EDU MRO MCL MOP MJA LRO LCL LOP
LJA LMU
* ATT: disagree
```