Quantifying Theory: Pierre Bourdieu

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Editors

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Sociologie des comportements intentionnels, 2006, Paris, Economica, 422 p. (with Alain Degenne). With Philippe Coulangeon, he published "Is 'Distinction' Really Outdated? Questioning the Meaning of the Omnivorization of Musical Taste in Contemporary France" in *Poetics*, 35, 2–3, 83–111.

Don Levy trained as a sociologist at the University of Connecticut and experienced as a sports fan, Dr. Levy currently serves as the Director of the Siena College Research Institute in Loudonville, New York. Dr. Levy continues to investigate the centrality of sport in the United States and the social implications of that field of practice. Additionally, Dr. Levy focuses on issues including social capital, civic engagement, and men and masculinities and is currently the vice-president of the American Mens' Studies Association.

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Abbreviations

ASCO	Australian Standard Classification of Occupations
CA	Correspondence analysis
CAMSIS	Cambridge Social Interaction and Stratification Scales (UK)
CATPCA	Categorical principal components analysis
CEO	Chief executive officer
CIRP	Cooperative Institutional Research Program (US)
CLL	Campus Life and Learning project (US)
CM	Cohort members
EGP	Erikson-Goldthorpe-Portocarero
EPCV	Enquêtes Permanentes sur les Conditions de Vie des Ménages ("The Continuous Survey of Living Conditions")
ESPN	Entertainment and Sports Programming Network (US)
EU	European Union
GCSE	General Certificate of Secondary Education (UK)
GDA	Geometric data analysis
GEODE	Grid Enabled Occupational Data Environment (UK)
HLM	Hierarchal linear modeling
LCA	Latent clustering analysis
MCA	Multiple correspondence analysis
MSFI	Modified Sports Fan Index
NGO	Non-government organization
OLS	Ordinary least squares
RMSEA	Root mean square error of approximation

SAT	Scholastic Aptitude Test (US)
SEM	Structural equation modelling
SID	Social interaction distance
SFI	Sports Fan Index
SPSS	Statistical Package for the Social Sciences
TAFE	Technical and Further Education (Australia)
UK	United Kingdom
US	United States of America

Chapter 1
Introduction: Approaches to Quantifying Bourdieu

Chris Sanders and Karen Robson

1.1 About This Book

This volume is the result of a conversation between the two editors about the importance of linking theory and methods. It may seem obvious to all social scientists that this is of upmost importance and indeed the foundation of the discipline of sociology (as sociologists, we can only speak of our discipline with any degree of certainty). In undergraduate and postgraduate teaching, however, the discourses of theory and methods are often rather disparate, with little direct communication between the two. There are 'theorists' and there are 'methodologists'. One group often claims that the other does a job that they cannot do, which is actually rather preposterous, as anyone schooled in the discipline up to the level of a Ph.D. should be able to muster up a few facts about research design as well as the key features of the theories of Marx, Weber and Durkheim – at the very least.

After investigating the availability of 'recent' books and articles specifically addressing the linkage between theory and methods, we were surprised by the paucity of materials in the area. Indeed, any good peer-reviewed journal publication can, and often does, demonstrate the operationalization of a theory, but the readership of these articles is assumed to be rather specialized. It leaves the less seasoned without much detail on the actual steps involved in the process and the possibility that there might be more than one way of measuring a concept, and hence any serious discussion around such topics.

Readers may assume at the outset that this volume is a celebration of Bourdieu, and in some respects it is. It is undeniable that he did produce many interesting concepts and promoted a fairly radical idea (at the time) about the processes of

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social reproduction. In this sense, this volume does celebrate such an accomplishment – to have developed and promoted such an innovative and vast set of concepts and theories that are of great interest to social scientists (and others) today. We do not, however, believe that Bourdieu's work is flawless, and indeed, the chapters in this volume have been written to *test* his theories, not blindly promote them. We do appreciate that some scholars (cf. Goldthorpe, 2007; Kingston, 2001; Nash, 1999) assert that Bourdieu is over-celebrated and that there is actually little consistent evidence in support of many aspects of his vast theoretical oeuvre. Indeed, chapters here do provide evidence that perhaps some aspects of his theory require rethinking and adjustment, particularly if we wish to apply them to present day conditions and to societies apart from France.

The chapters in this volume share in common that they all seek to answer a research question using one or more aspects of the theories put forth by Pierre Bourdieu. We could have selected a different social theorist, but felt that a focus on Bourdieu was particularly timely given his popularity in the social sciences in recent years. Figures 1.1 and 1.2, for example, show keyword hits in the databases Sociological Abstracts and Web of Science (focusing on the Arts and Humanities and Social Sciences databases) for "Bourdieu", "cultural capital" and "habitus" from 1990 to 2007. It is true that not all hits for habitus may be specifically related to Bourdieu (as the chapter by Cockerham and Hinote in this volume discusses, the concept predates Bourdieu), but the exercise is merely to show the growth in the discussion of his work, theories, and applications of his theory to current research questions.

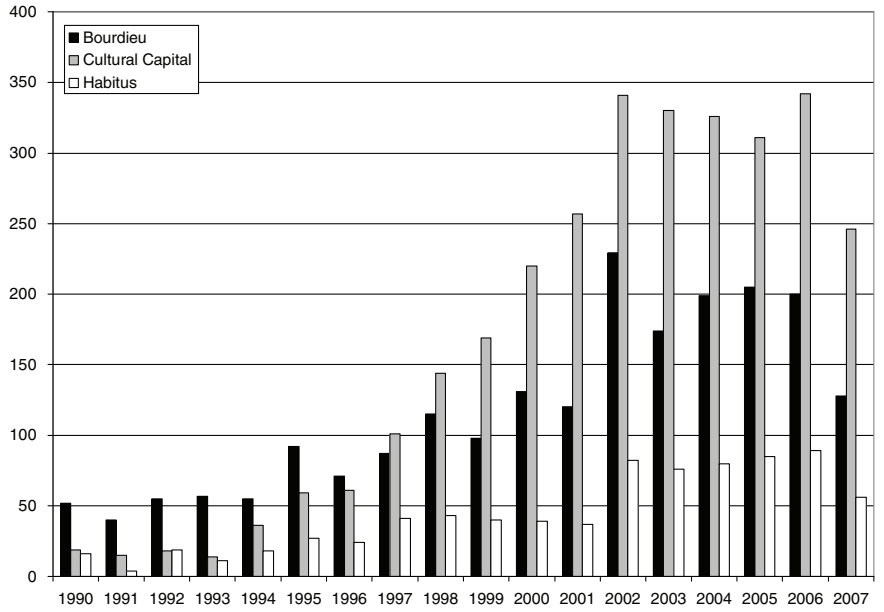

Fig. 1.1 Keyword hits in Sociological Abstracts 1990–2007

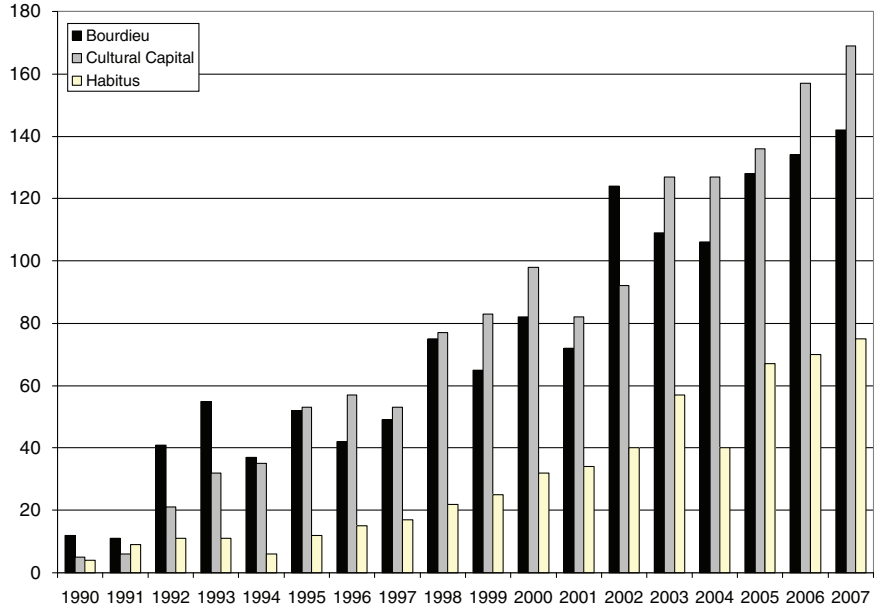

Fig. 1.2 Keyword hits in Web of Science, 1990–2007

After deciding to go ahead with the idea of an edited volume, we were in the position to solicit proposed chapters. We did this through an open call, which was circulated on various international listservs and through individual emails to known scholars in the area. The result was far more chapter proposals than we could ever put in a single volume. The selection in this volume are the ones that best fit around some general themes and which best fit the mandate of the book – to demonstrate the connection between theory and methods using the concepts suggested by Bourdieu.

It has always been our objective to keep this volume as diverse as possible while still maintaining an overarching continuous theme. Table 1.1 illustrates the diversity of the authors, data, quantitative approaches, and topic areas that comprise the chapters of this volume. The authors (and their data) come from North America, Western and Eastern Europe, and Australia. We also have a mix of junior and senior researchers, the latter of which have published extensively using Bourdieu's theories to test relationships in their data. As the topic areas and research questions are so diverse, the authors also use a spectrum of quantitative techniques to undertake their analyses.

1.2 Organization of the Book

The contributors have been asked to tailor the structure and content of their chapters to accommodate a wide audience. We recognize that readers will approach this volume having varying degrees of expertise with empirical research in general

Table 1.1 Summary of chapters in this collection

Author(s) by chapter	Bourdieu concept	Subject area	Location	Method
Lebaron	Fields	Stratification	France	Theory/MCA
Hjellbrekke and Kornes	Fields	Power	Norway	MCA
Coulangeon and Lemel	Social topography	Social position	France	PCA and cluster analysis
Veenstra	Transmutations of capitals w/in field	Social space/ position	Canada	CATPCA
Andres	Cultural and social capital	Education	Canada	Structural equation modeling
Marks	Cultural capital	Education and labor outcome	Australia	Random effects models
Robson	Cultural capital	Forms of capital	UK	OLS and logistic regression
Zimdars, Sullivan and Heath	Cultural capital	Education	UK	Logistic regression
Vryonides	Social and cultural capital	Education	Greece and Cyprus	OLS and bivariate analysis
Bottero, Lambert, Prandy and Mctaggart	Social topography	Occupational stratification	Global	Cambridge scale a tool to measure of Bourdieu
Garrett	Cultural reproduction	Gendered labor (historical context)	Canada	X^2
Martin	Cultural capital	Education	US	Latent class analysis
Róbert	Cultural consumption	Lifestyles	Hungary	OLS
Levy	Habitus	Sport fanship	US	Cluster analysis
Cockerham and Hinote	Habitus	Health	Global	Theory/multilevel modelling

and quantitative methods in particular. In the interests of providing instructional value, the chapters place a heavy emphasis on operationalization of variables and step-by-step interpretation of findings. We anticipate that this approach will prove useful both to novice learners and experienced researchers with an eye toward expanding their methodological repertoire.

We decided to avoid organizing chapters thematically into discrete sections. Because so many chapters cut across a range of Bourdieu's theoretical concepts, it was felt that rigid groupings would seem forced. Instead, the chapters loosely follow the trajectory of Bourdieu's research program outlined early-on by Frédéric Lebaron.

We turn, then, to our authors. In the next chapter, Frédéric Lebaron sets the stage by explaining the trajectory that led Bourdieu to develop his cohesive theory

of social stratification, comprised of familiar components including the forms of capital and the field, using quantitative modeling techniques.

> In *Distinction,* Bourdieu develops the idea that if "quantification" is to take place in sociological research, it has to be multidimensional and aim as a first step at operationalizing each of the basic dimensions of social space, namely the various types of capitals (e.g. economic, cultural, social and symbolic)

Despite the perceived shortcoming of quantitative methods then and now as well as the distaste many of his followers seem to hold for such techniques, Lebaron reminds us that Bourdieu maintained specific reasons for his interests in quantifying data and putting his thinking into mathematical terms. Many of these concerns are carried forward in the subsequent chapters of the volume.

1.2.1 Spatial Modeling Techniques

One set of authors favor the use of spatial modeling techniques to creatively map aspects of social space in different cultural and geographic settings. For Bourdieu, social life consists of autonomous "fields" in which people are bounded by the hierarchies of social arrangements. Fields are essentially arenas of competition and often conflict, where individuals pursuing goals interact and maneuver. This is accomplished largely through the exchange of forms of capital. By way of spatial modeling techniques, some contributors map hierarchy and interaction within fields while others explore how forms of capital are exchanged.

Johs Hjellbrekke and Olav Korsnes apply multiple correspondence analysis to explore the dimensionality and space relations of elite structures of power in Norway. Using survey data of various elite positions and other high-ranking civil servants, they present a map of the Norwegian field of power. They conclude that not only is Bourdieu's work valid outside French society, but also may produce new insights about processes of societal change in societies other than France.

Philippe Coulangeon and Yannick Lemel revisit the original principles of lifestyle analysed by Bourdieu in *Distinction*. In particular they empirically evaluate *structural homology,* the assumption that social class structure is linked to aesthetic preference. Using recent survey data on "cultural and sports participation," they evaluate the extent to which structural homology between practices and social positions is still observable.

In a North American context, Gerry Veenstra uses Canadian data to analyze how different forms of capital are converted into one another. Departing from the approach of using linear models to test the effects of capital, he instead applies relational statistical techniques that he deems more "faithful" to Bourdieu's field-theoretic approach to capitals.

It is worth noting that each of these three chapters either implicitly or explicitly addresses questions about validity frequently voiced in social science. And these findings suggest that, yes, Bourdieu's theories have applicability both in France today and in other Western societies, to varying extents.

1.2.2 The Capitals and the Life Course

Some of Bourdieu's best known scholarship (with Jean-Claude Passeron, 1979, 1990 and others) is in education, particularly higher education and its role in the reproduction of class relations. So, it is appropriate that many of our contributors focus on aspects of education in different countries and its future contribution to student outcome. One group of authors approaches this challenge by applying different regression techniques to evaluate contradictory claims about the validity and long-term effects of types of capital. In one way or another, they all seek answers to same question: Are forms of capital really the strong predictors of cultural reproduction and stratification that Bourdieu assumed?

Leslie Andres' chapter, for example, employs longitudinal questionnaire data from the British Columbia, Canada *Paths on Life's Way* study. Her project investigates the ways young people's educational dispositions are constructed and shaped by examining how parents transmitted cultural and social capital. In turn, Andres evaluates how students have invested and converted the various forms of capital into educational attainment and occupational status. The longitudinal design is particularly useful for integrating consideration of habitus, an essential though often neglected component of research on cultural reproduction.

Gary Marks examines the effects of cultural capital on educational and early labour market outcomes in Australia. His data indicate that cultural capital only weakly mediates the effects of socioeconomic and social background. He notes that while the effects on educational outcomes are relatively strong, they can be largely attributed to reading behavior in general as opposed to participation in elite culture. Marks therefore concludes that the negative effects of culture are primarily due to the limited employment experiences of people with higher cultural capital.

One of the editors, Karen Robson, has also contributed a chapter to this volume, focusing on the forms of capital and the transmission of cultural capital into economic and social capital in later-life. Using time diaries collected in adolescence from a British birth cohort, Robson is able to examine if participation in elite culture at age 16 is associated with social and economic capital in adulthood. She finds evidence of this association, particularly with regard to investment to leisure reading and writing in adolescence and later-life capitals. She argues that the relation between the forms of capital must take into consideration the continuous conversion that theoretically occurs between them as well as the investment process that is implied within the metaphor of "capital".

Anna Zimdars, Alice Sullivan and Anthony Heath investigate whether cultural capital influences the chances of being offered a place for undergraduate study at the University of Oxford in the UK. Although they find that cultural knowledge helps to predict the chance of admission to Oxford, it cannot account for many significant differences by gender, ethnicity and class. They conclude that cultural capital is therefore not as strong of a class differentiator as Bourdieu proposed. In their appendix is an excerpt of the Cultural Knowledge Test (Sullivan, 2001), which is useful in parsing out components of cultural capital, and which is a key component of Sullivan's earlier much-cited work.

Marios Vryonides integrates measures of both social and cultural capital to examine students' post-secondary school choice, as well as their parents' aspirations in relation to their children's educational and occupational prospects in contemporary Cyprus and Greece. Notably, this work builds upon a well-known study by Katsillis and Rubinson (1990), which analyzed similar measures in the context of Greece. Vryonides' findings seem to support the contention these forms of capital influence the pursuit of education and occupation in both Greece and Greek Cyprus.

Something to take from this selection of chapters is that the notion of "capital" is more ambiguous than it is often credited as being. In fact, one of the issues faced by the authors was the complexity of measuring capitals, and in particular the cultural variety. As Kingston (2001) notes, many conceptually distinct variables have been categorized as cultural capital. Exactly what, then, constitutes cultural capital and which measures of the concept are likely to be significant, were key questions that each chapter addresses and in often innovative ways. We are pleased not only with how the contributors devised their measures but also with their explanations of why different measures were suitable to their projects. As such, we hope these examples provide food for thought to other scholars interested in empirically measuring forms of capital.

1.2.3 Class Structure

Another group of authors take up the broader issue of modeling social class structure over time. The concept of social class is somewhat vaguely defined by Bourdieu, though according to DiMaggio (1982) is reflected in strategic practices rooted in the division of labor. Thus, kinds of occupational measures figure prominently in many of these chapters. The variety of proposed methods are as creative as they are diverse, and draw upon a range of rich data sources in Europe and North America.

Wendy Bottero, Paul Lambert, Kenneth Prandy and Stephen McTaggart introduce to this volume an established methodology for studying social interaction distances between occupations – the Cambridge Social Interaction and Stratification Scales (CAMSIS). They point out that Bourdieu's own work neglects this aspect of social connectivity, thereby limiting analysis of a vital part of social networks. The authors then discuss the practical implementation and argue that social interaction distance measures – an approach to understanding social stratification through the analysis of social interaction patterns – connect very easily with Bourdieu's conceptions of social space.

Heather Garrett offers a unique historical analysis based on Canadian census data from the mid-nineteenth century. Using Bourdieu's theory of cultural reproduction as an analytic framework, she argues that taking in boarders was one strategy employed by married women to help supplement the family economy. Urban-rural and ethnic differences are explored by comparing married women

who accommodated boarders and others in the home to those who did not. Using Bourdieu in the context of historical analysis sheds light on a largely overlooked application of theory and methodology.

Nathan Martin presents results from latent clustering analysis (LCA) of student background characteristics to describe the class structure of elite American universities. He argues that LCA not only allows a multidimensional view of social class, but is also provides a test of Bourdieu's contention that the objective foundation to social class can be mapped along economic and cultural axes. Given Bourdieu's particular interest in hierarchies among members of the dominant class (as opposed to between classes), this chapter offers an insightful look at the movement of students from professional class backgrounds within elite US institutions like Duke University.

In a slightly different vein, Péter Róbert investigates the relationship between lifestyle and social position in pre- and post-communist Hungary. Lifestyle analysis, he notes, is particularly relevant in Eastern European societies given the relatively recent socioeconomic transformations. Contrary to traditional research maintaining modest to low levels of social differentiation, contemporary analyses of lifestyle indicate more pronounced levels of inequality. Data collected from four nationwide surveys between 1982 and 1998 are used to create measures of cultural and material consumption. Róbert concludes the lifestyle and consumption groups have changed in Hungary since post-Communism.

1.2.4 Habitus

Finally, *habitus* – perhaps the most complex and elusive of Bourdieu's concepts – is creatively explored in two chapters with a particular interest in establishing a foothold in future research endeavors. Habitus, we are told, is similar but not reducible to class; it consists of perceptions that are enduring yet malleable. The central question for these authors, then, is how to go about empirically measuring dispositions that are comprised at once of both objective structures and individual actions – hardly a trivial task for quantitative scholarship. As mentioned above, Andres focuses on habitus throughout her analysis of young people's educational dispositions as well, for example, using habitus as one of many Bourdiesian concepts operationalized in her study.

Don Levy observes that in the US, the ubiquity of sports culture constitutes a "field" or social location of sorts. Thus his chapter posits and tests a theory of *fanship habitus* which, he argues, reflects a "second nature" among a class of Americans who self-identify as active sport consumers. The data are drawn from a web-based survey and then compared against similar data from the US Census as well as Gallup Poll and the Miller Lite Study. His results indicate that fanship habitus is the both the incorporation and expression of social location, practices and the resulting cognitive structures expressed through perceptual tendencies and dispositions toward sports.

William Cockerham and Brian Hinote bring this volume to a close by offering a future direction for scholars interested in modeling habitus. They rightly point out that as a subjective construct, habitus represents a methodological challenge in quantifying as it involves both dispositions toward action and the influence of the larger society on the individual. Bourdieu frequently used correspondence analysis but, as they note, this method cannot be utilized to test hypotheses or to measure the effects of habitus on social behavior. Cockerham and Hinote conclude the chapter by arguing in favor of hierarchal linear modeling (HLM), or multilevel modeling as it is also commonly referred. This technique allows for variables at various "levels" of analysis to be included in estimation techniques, so that characteristics of individuals, communities and large social entities can be modeled together in a single estimation, with appropriate adjustments made to coefficients standard errors, which account for multiple observations at the 'higher levels' of the data (i.e. numerous respondents will belong to the same community, for example).

1.3 A Final Comment to Readers

As our brief overview has demonstrated, the subject areas covered by the chapters is diverse, and hence the operationalizations of Bourdieu are also diverse. We hope that the different approaches employed by authors will spark debate amongst scholars and provide lively discussions in courses orientated towards research design. Many chapter authors find strong evidence in support of Boudieu's theories, while others do not. Findings, of course, hinge on data issues and the validity of how concepts are measured. There are no objectively right or wrong ways to instruct individuals on how to do this – but the chapters herein provide a valuable set of examples for how various individuals have chosen to make such decisions, often given the restraints of secondary data analysis – and of course one's level of expertise in quantitative analysis.

Chapter 2
How Bourdieu "Quantified" Bourdieu: The Geometric Modelling of Data*

Frédéric Lebaron

Abstract There is an essential aspect of Bourdieu's work that has been somewhat neglected by those who have written about Bourdieu's theory, that is his constant concern for quantifying his data material and for putting his thinking in mathematical terms. The first purpose of this chapter is to provide landmarks for this aspect, and to outline the solution that was retained by Bourdieu, at least from La distinction onward: namely the geometric modelling of data. In a first part, this chapter describes Bourdieu's lifelong commitment into statistics (quantification and formalization), which lead him to the choice of geometric modelling of data through the use of correspondence analysis (CA) and multiple correspondence analysis (MCA). In a second part, examples of Bourdieu's modelling of the data are successively presented and analysed. Bourdieu's program for quantification and formalization is not an arbitrary result of historical contingencies: it is the logical consequence of a critical experience and reflection about the shortcomings of dominant quantitative approaches in social sciences, which led him to a conscious and systematic move toward a geometric frame-model more adapted to his conception of the social world.

2.1 Bourdieu and Statistics: A Lifelong Commitment

As early as the "Algerian times" (the second half of the 1950s, with a first book *Sociologie de l'Algérie* published in 1958), Bourdieu cooperated with statisticians of the Institut National de la Statistique et des Etudes Economiques (the French National Institute of Statistics and Economic Studies). He did it particularly during the collection

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*This chapter is the result of a collective work undertaken since 1998 with Henry Rouanet and Brigitte Le Roux. Part of the ideas presented here was presented at the Correspondence Analysis and Related Methods (CARME 2007) conference of Rotterdam in June 2007.

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of large-scale labour force surveys undertaken during the period of the liberation war in Algeria (until 1960 when he had to come back to France). Bourdieu applied his anthropological perspective to the sociological interpretation of survey data, especially the statistics of unemployment (Bourdieu Sayad, Darbel, & Seibel, 1963).

This collaboration continued in the 1960s at the Centre de Sociologie Européenne through multiple scientific exchanges, as reflected in the contribution to *Les héritiers* (Bourdieu & Passeron, 1964) by the statistician Alain Darbel, who is associated with the epoch-making calculation of the chances of access to university for the various social class categories. In *L'amour de l'art*, Bourdieu and Darbel (1966) develop the equations of the demand for cultural goods, where *cultural capital,* measured according to the level of diploma, appears as the central variable helping to explain inequalities in access to museums.

Between 1966 and 1971, Bourdieu elaborated theoretically the concept of field (Bourdieu, 1966, 1971); at the same time, he was becoming aware of the shortcomings of the traditional "quantification" tools, namely regression analysis, which he already makes clear in a chapter of *Le partage des benefices* (Darras, 1966) written with Darbel (under the title "La fin d'un malthusianisme").

As he would firmly state in *Distinction*, "the particular relations between a dependent variable (political opinion) and so-called independent variables such as sex, age and religion, tend to dissimulate the complete system of relations that make up the true principle of the force and form specific to the effects recorded in such and such particular correlation" (Bourdieu, 1979: 103).

To Bourdieu, social causality amounted to the global effects of a complex structure of interrelations, which is not reducible to the combination of the multiple "pure effects" of independent variables. The structural vision, which appears to be central for Bourdieu as for other social scientists in this period, relates to the strong influence of "structuralism" in French social sciences in the 1960s, especially with the models of linguistics and anthropology (around Levi-Strauss, who was a central reference for Bourdieu).

Bourdieu's strong interest for a new formalization also relates, though not explicitly, to the dynamics of mathematics under the influence of a well-known group of French mathematicians called "Nicolas Bourbaki", which was also an implicit reference-frame for sciences in general, and for specialists of the human and social sciences in particular. During this period, attempts for both formalizing and quantifying social sciences were numerous and largely inspired by various fields of modern mathematics (particularly algebra). Bourdieu himself often referred to the need for scientific instruments which would be capable of grasping the relational dimension of social reality.

Meanwhile, the geometric approach of data analysis developed by Jean-Paul Benzécri and his school around Correspondence Analysis was emerging (see Le Roux & Rouanet, 2004; Rouanet, 2006). At the end of the 1960s,[1] Bourdieu

[1] A first empirical attempt with CA is evoked in a footnote of *Un art moyen (Middle-Brow Art)*, a book which presents the results of a survey about photography. It seems clear that Bourdieu was not completely convinced by this first application, but he remained eager to find a model of the multidimensional social aspects of taste, which were not made visible with a series of contingency tables.

turned to this approach as being the method most in "elective affinities" with his own theory (Rouanet, Ackermann, & Le Roux, 2000). In *Distinction* ("A three-dimensional space"), Bourdieu develops the idea that if "quantification" is to take place in sociological research, it has to be multidimensional and aim as a first step at operationalizing each of the basic dimensions of social space, namely the various types of capitals (e.g., economic, cultural, social and symbolic). The next step would be to combine them so as to provide a geometric model of data. Bourdieu stated "I use Correspondence Analysis very much, because I think that it is essentially a relational procedure whose philosophy fully expresses what in my view constitutes social reality. It is a procedure that 'thinks' in relations, as I try to do with the concept of field".[2]

A breakthrough in Geometric Data Analysis (GDA) was accomplished when Correspondence Analysis was applied to tables representing individuals by variables, synthesizing many contingency tables by two fundamental clouds: the cloud of properties and the cloud of individuals. More specifically, for categorized variables, Multiple Correspondence Analysis (MCA) emerged as a standard tool that was applied in "Le Patronat" (1978), *Homo Academicus* (1984), *La noblesse d'Etat* (1989b), *Les structures sociales de l'économie* (1990, 2000b), and, in a new variant called specific MCA, "Une revolution conservatrice dans l'édition" (1999), Bourdieu's last quantitative empirical work.

Since the late 1970s, geometric modelling has been the basis of all empirical work conducted along Bourdieu's line. It has allowed Bourdieu to explore the major hypotheses of his theory such as: "the positions [in a field] command the position-takings" (Bourdieu, 1992). In his last lecture at College de France, in 2001, Bourdieu reiterated: "Those who know the principles of multiple correspondence analysis will grasp the affinities between this method of mathematical analysis and the thinking in terms of field" (Bourdieu, 2001: 70).

This tradition of geometric modelling to quantify the basic dimensions of social space and explore sociological hypotheses, has been pursued in recent work directly inspired by Bourdieu's thinking: Sapiro (1999), Rosenlund (2000), Lebaron (2001), Duval (2004), Hjellbrekke et al. (2007), etc.

2.2 Bourdieu and the Geometric Modelling of Data

Bourdieu very soon developed a multidimensional perspective, which was already present in his early writings of the 1960s when he referred to *diverse* species of capital (economic, cultural, social, and symbolic). His scientific objective had been to counter-balance a purely economic vision of society (then becoming more popular under the influence of rational choice theorists like Gary Becker) and, at the same time, to contest a purely idealistic vision of the cultural domain by introducing an economy of symbolic goods (regarding this double move, see Lebaron, 2003). He

[2] Preface of the German edition of *Le métier de sociologue*, 1991.

tried to integrate both dimensions in the perspective of a "general economy of the practices" as he would write in 1972 in a theoretical essay, *Outline of a Theory of Practice*.

As early as in the middle of the 1960s, Bourdieu formulated the concept of "field", which systematically addresses the relational aspects of social reality (Bourdieu, 1966). He more completely developed his "theory of fields" in the beginning of the 1970s (Bourdieu, 1971). A field is a small locus inside the global social space, which is defined by its relative autonomy, and where its proper structure is related to a specific configuration of agents. Agents in a field, even without any direct interaction (in contradiction with Weber's vision of the religious universe), are put into objective relations, defined by the distribution of their specific resources and by a corresponding process of domination (distinct from the global process of social domination between classes).

The "geometric modelling of data" was a practical way to combine objectification through quantitative data in a synthesis of statistical information (which is relatively close to the classical use of factor analysis), and the notion of field, inserted inside the global social space.

2.3 L'anatomie du goût (1976) and Distinction (1979)

L'anatomie du goût (Bourdieu & de Saint-Martin, 1976) is the first published application of geometric data analysis methods in Bourdieu's work, republished in 1979 in *Distinction*. It was realised (like other applications in the 1970s and 1980s) with the help of Salah Bouhedja, Bourdieu's statistical technician, and (even if it was not mentioned in the text of the article) after some interactions with mathematicians and statisticians, who, for example, reacted to the first presentation of the results.

The data were collected through a survey on two complementary samples, using the same basic questionnaire, which was passed in 1963 ("Kodak survey", as it was called in the Centre de Sociologie Européenne) and 1967 ("taste survey"). This procedure aimed at producing a general sample able to give an appropriate picture of the French population.

The scientific objective of *L'anatomie du gout* was first to provide a synthetic vision of the social space as a global structure (which is presented on a "hand-made" figure described as resulting from many successive correspondence analyses, hereafter CA). A second objective was to study two sub-sectors inside the social space more in-depth: the space of the dominant classes and the space of the middle-classes ("petite-bourgeoisie"), each study being based on the analysis of an Individuals by Variables table (from the respective sub-population).

The main elements of the geometric modelling of data were already present in this work, as Henry Rouanet, Werner Ackermann and Brigitte Le Roux have shown (Rouanet et al., 2000). Bourdieu and de Saint-Martin applied CA to Individuals by Variables tables, which was a common practice at the time, when the use of multiple correspondence analysis (hereafter MCA) was not yet developed.

The choice of active and supplementary variables[3] was subtle: questions on tastes and cultural practices were taken as active questions of the analysis; socio-demographic and occupational questions were used as supplementary questions, and figured on a transparent which could be superposed to the first principal plan resulting from the CA. This technique of visualisation gives a strong intuition of the sociological relations between the space of tastes (lifestyles) and the space of social positions.

The cloud of individuals was present in the analysis: for specific fractions of the dominant classes, the dispersion of individuals was made obvious through the contours of various sub-clouds ("cadres", or "patrons") drawn by hand. This is what later will be called "structuring factors", the cloud of individuals being systematically structured by external factors in structured data analysis (Le Roux & Rouanet, 2004).

Species of capital are "fundamental dimensions" of the space to investigate; their combination (the first principal dimensions which are interpreted) is a specific result of the analyses. The resulting global social space in *L'anatomie du gout* is three-dimensional: the first three dimensions are interpreted in terms of the volume of capital, composition of capital, and seniority in the class. When referring to the space of the dominant classes or the "petite-bourgeoisie" (bi-dimensional), the first axes are interpreted in terms of capital composition and seniority in the class. The analysis results in a strong sociological statement about the existence of a structural homology between the "space of lifestyles" and the "space of social positions", both being interpreted as two aspects of the same reality (Fig. 2.1).

Among today's research questions following this classical analysis is the problem of the universality of these two results in other (national or historical) contexts. For scholars like Lennart Rosenlund (2000), this configuration seems to be an invariant in developed capitalist societies, where the opposition between economic capital and cultural capital has become more pronounced.

2.4 "Le patronat" (1978) and *La noblesse d'Etat* (1989)

The second occurrence of a use of GDA by Bourdieu is a well-known article where Bourdieu and de Saint-Martin studied a population of economic elites (heads of enterprises, CEOs) with the help of MCA. In this article (republished in Bourdieu's *State Nobility*), the authors justify the central use of MCA as a way to discover a hidden relational reality which is not conscious, but nevertheless "more real" than the partial and practical perceptions of the agent. They refer to programs and publications from the statistician Ludovic Lebart.

The novelty of the analysis probably first lies in the type of data which were used. Biographical data were collected in various directories and biographical

[3] Active questions (or variables) are questions which participate to the creation of the distance in the two spaces: space of modalities, space of individuals. Supplementary questions (variables) are projected onto the resulting space.

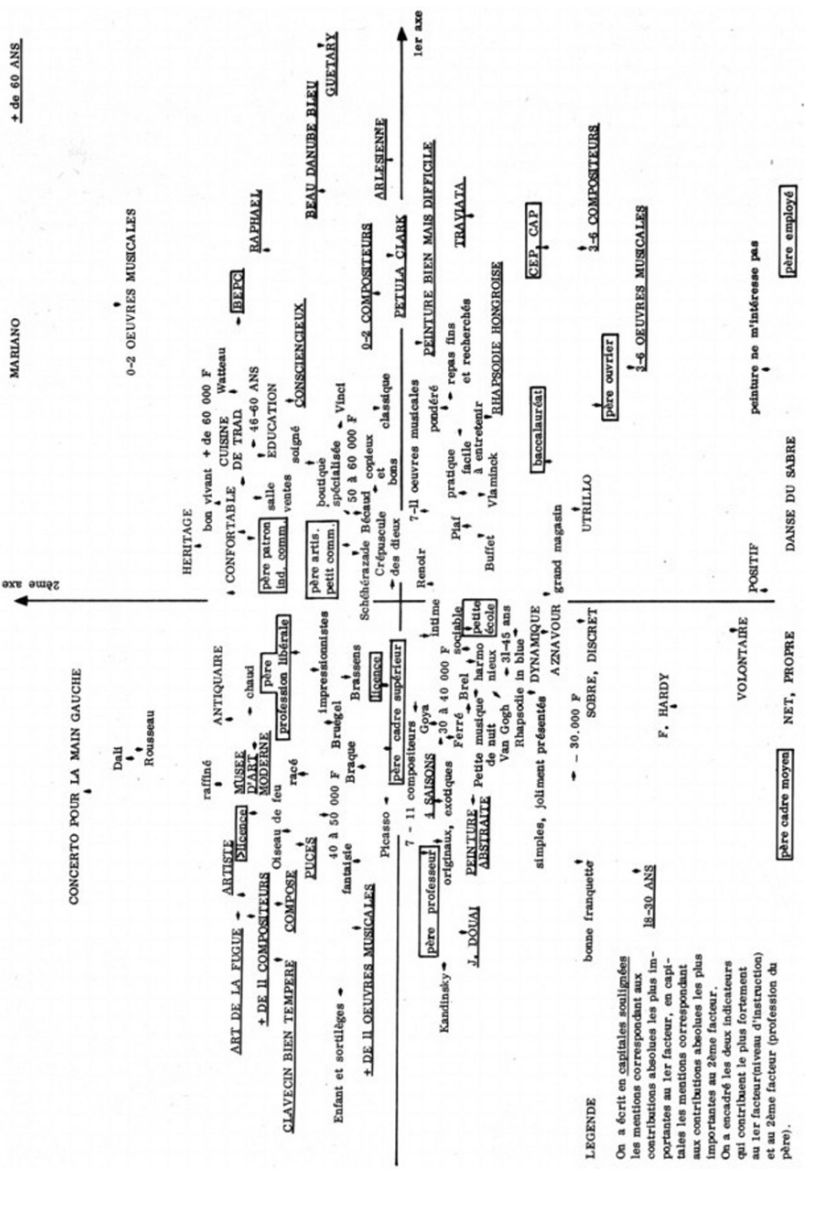

Fig. 2.1 Schema 3 "Les variants du goût dominant"

sources, in a collective process ("prosopography") directly inspired by growing scientific practices in social history (coming from ancient and medieval history). Here again, the main elements of the scientific practice of GDA were present in Bourdieu and de Saint-Martin's text. Active modalities were selected from a set of biographical data, defining the various species of capital at stake. These modalities were grouped into different "headings" (groups of questions), with an important number of modalities referring to social properties (from demographic characteristics to educational trajectory) and some of them to more specific assets in the economic field (positions in boards, distinctions, etc.). In particular, the following characteristics were considered:

- Demographic properties: place and date of birth, number of children, place of residence
- Social and familial origin: profession of the father, seniority in class, presence in the *Bottin Mondain* (a directory of social elites)
- Educational trajectory (i.e. "grand lycée parisien")
- Professional (career): (i.e. "grand corps")
- Specific positions in the field: economic power positions, membership to councils, etc.
- Indicators of symbolic capital: official distinctions, decorations, etc. and
- Indicators of membership to mobilised groups (like associations)

The cloud of individuals was explicitly given, with the names of elites helping the reader who "knew" some agents to have a direct intuition of the social structure of the field (Fig. 2.2).

The interpreted space is two-dimensional, with a first axis opposing "public" to "private" positions and trajectories (the field then being dominated by technocratic managers, coming from Ecole nationale d'administration or Polytechnique) and a second axis opposing "newcomers" and "established". This analysis provides a strong view of the structure of the field of economic elites as being defined by the relation to the State (bureaucratic capital) and by a process of dynamic competition between fractions, first defined by their seniority in the field and correlated specific properties (the new "generation" in the field being more often trained in private business schools).

An explanatory perspective was clearly present in the analysis, which aimed at understanding the space of managerial strategies (for example, human resources, studied specifically in another MCA) in relation to their positions in the field. In *La noblesse d'Etat*, this analysis was combined to a general study and interpretation of structural homologies, especially those existing between the field of power in which the elite is included, and the field of "grandes écoles" (higher education institutions).[4]

[4] The field of "grandes écoles" in the 1980s is studied with the help of CA in *La noblesse d'Etat*. The table is a contingency table crossing schools and professions of the father.

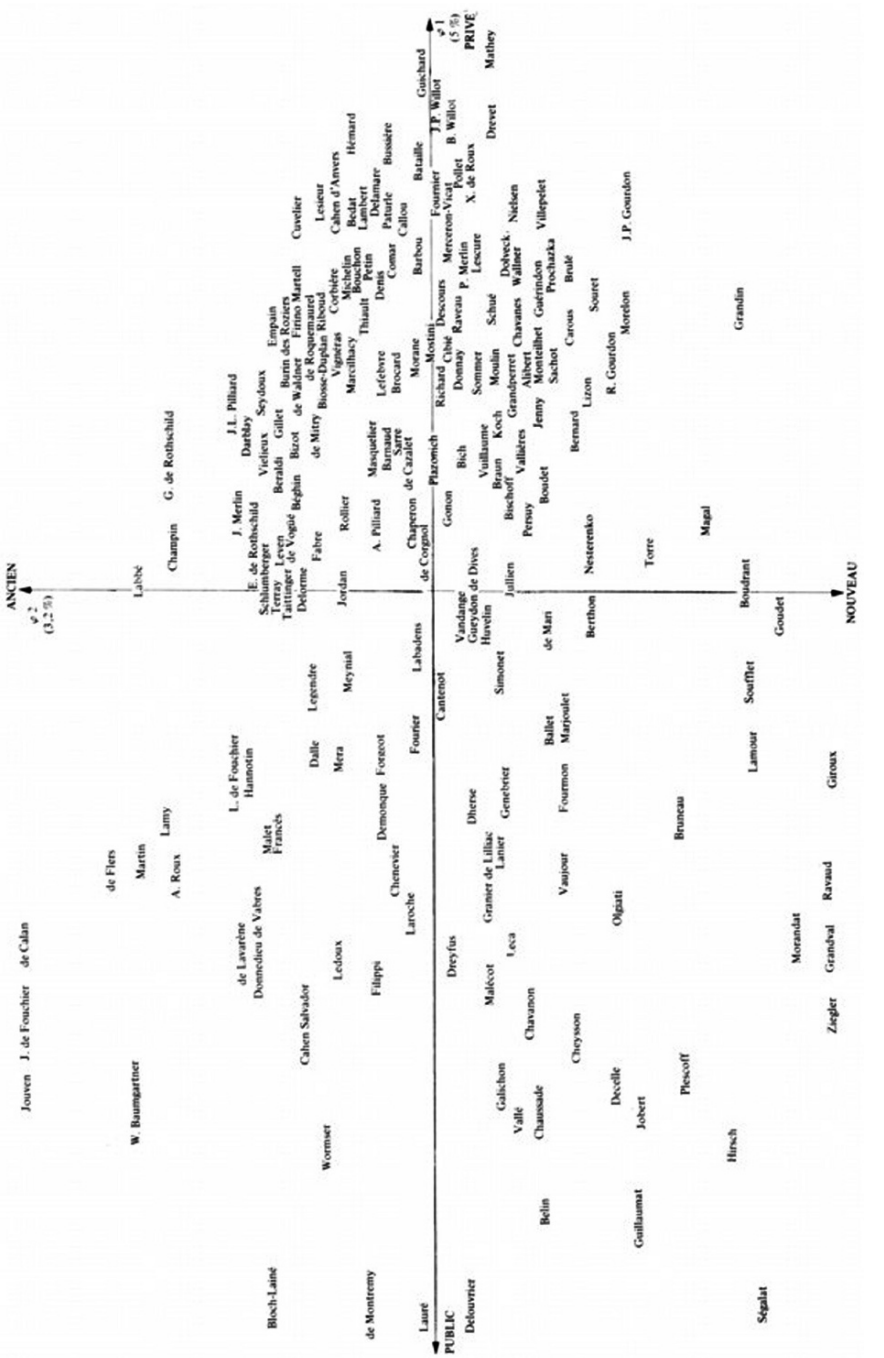

Fig. 2.2 Cloud of individuals, plane 1–2, p. 10

2.5 Homo Academicus (1984)

In a prosopographical study – i.e., an analysis of the biographical properties of the members of a specific historical group – that began right after May 1968, Bourdieu and his group began to collect systematic information about academics in France. Their intention was to explain the specific crisis which took place inside the academic field during the May events (a general strike and student protests which had important political consequences), especially in the humanities and social sciences. This important amount of biographical information led to the construction of two spaces resulting from two different analyses (MCA) published in 1984 (in *Homo academicus*): (1) a space of academics of all disciplines and (2) a space of specialists in humanities and social sciences ("lettres et sciences humaines").

Active questions were selected in both general social properties and specific position variables (indicators of symbolic capital, career, etc.). Position-takings (like public support to the director of Ecole normale supérieure, Robert Flacelière) were taken as supplementary questions. A cloud of individuals from "humanities and social sciences" was published with the initials of the names in French (and the full names in the English version).

Here again, an explanatory perspective was based on a close qualitative look at the cloud of individuals: position-takings in May 1968 (for or against the student's movement, the worker's strike, etc.) were related to specific positions in the field, with an opposition between traditionally established (orthodox) and modernist newcomers (heretics) as a central polarisation inside French universities.

2.6 "L'économie Domestique" (1990) and *The Social Structures of the Economy* (2000)

In the analysis of an economic field (the field of individual house in France), undertaken in the 1980s and first published in 1990, two analyses were presented: one described the "field of producers", and the other the "field of efficient agents" involved in the making of a public policy in this sector. Both were based on prosopographical data, the first about real estate enterprises and the second about individuals from different fractions of the field of power related to this sector of public action.

In the analysis of the "field of producers", the first axis is interpreted as an opposition between large national and small local companies, and the second as an opposition between two juridical structures of intermediary enterprises (with two related styles of production). This structure is used by Bourdieu to interpret economic strategies, largely depending on the positions in the field, especially the way the companies both anticipate and adjust to sectors of demand (or to sectors of the social space).

In both analyses, one finds again the clouds of individuals with names, sub-clouds of individuals with drawn geometric contours (as in *Distinction*) and an explanatory perspective (with as *explanandum*, respectively economic strategies and position-takings

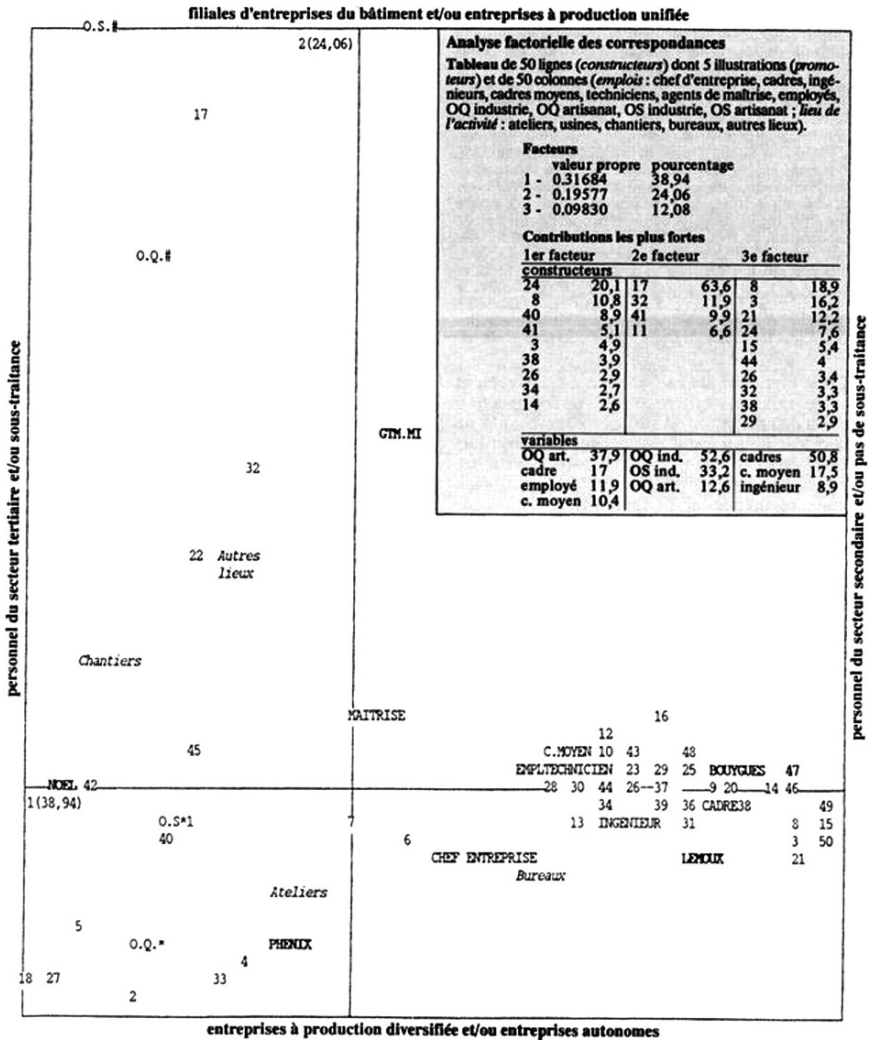

Fig. 2.3 Field of single-family housebuilders, *The Structures of the Economy*, p. 46

in the public policy debate). In *The Social Structures of the Economy*, Bourdieu insisted on this explanatory perspective made possible by GDA (Fig. 2.3).

2.7 "Une Revolution Conservatrice dans l'édition" (1999)

This article was the last publication using GDA methods by Bourdieu himself, written in collaboration with Brigitte Le Roux and Henry Rouanet (following the Köln conference on the empirical investigation of social spaces in 1998, after

which a co-operation between both groups of researchers began). The analysis was based on prosopographical data collected about a small population of companies publishing literary books in French, including translations from foreign languages. The method used was specific MCA, invented by Brigitte Le Roux and Jean Chiche, which allows the analysts to determine certain modalities of active questions as "passive" modalities of active questions (for example, no-information or "junk" modalities) without destroying the symmetry properties of the method. With this technique, only active modalities of active questions create the distance in the constructed space.

As active questions, Bourdieu took indicators of capital (i.e. symbolic, economic, etc.). Principal component analysis was used in order to create an index of importance to reduce the redundancy of size variables. A Euclidean classification, based

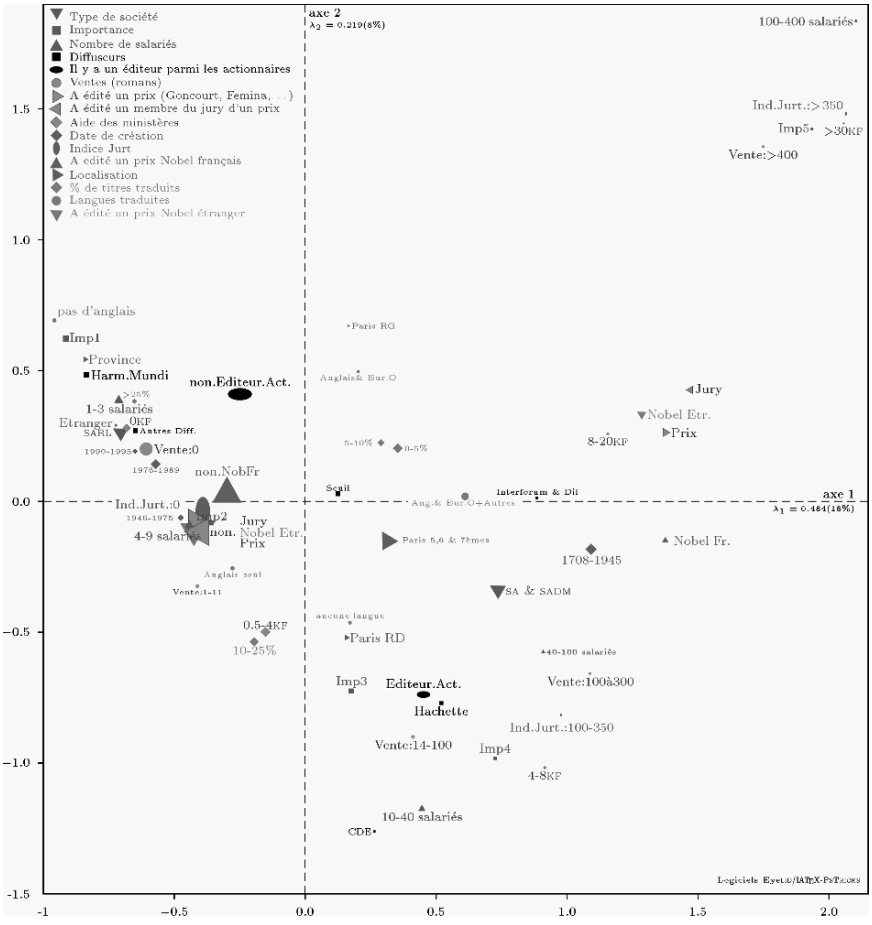

Fig. 2.4 The space of most contributing modalities in planes 1-2 and 2-3

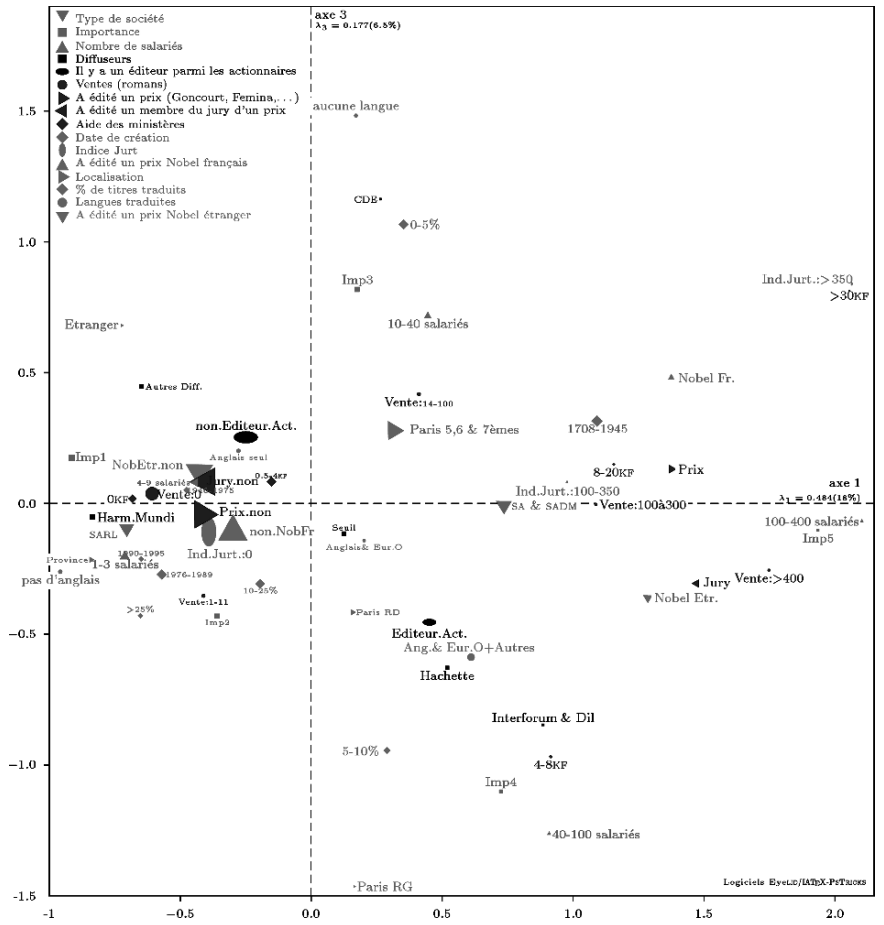

Fig. 2.4 (continued)

on the distance of the specific MCA, was utilized in order to characterize sub-groups of publishers, and to raise questions about the future dynamics of the market (for example the concentration processes). The sociological interpretation by Bourdieu insisted on the "chiasmatic" structure of the field of publishers, with a first opposition between big and small companies, and a second one between a commercial and a literary legitimate pole, which appears to be in homology with the classical composition axis found in previous analyses. Sociological interpretations assessed the relations existing between positions and position-takings (editorial choices) by qualitative comments based on the cloud of individuals (Fig. 2.4).

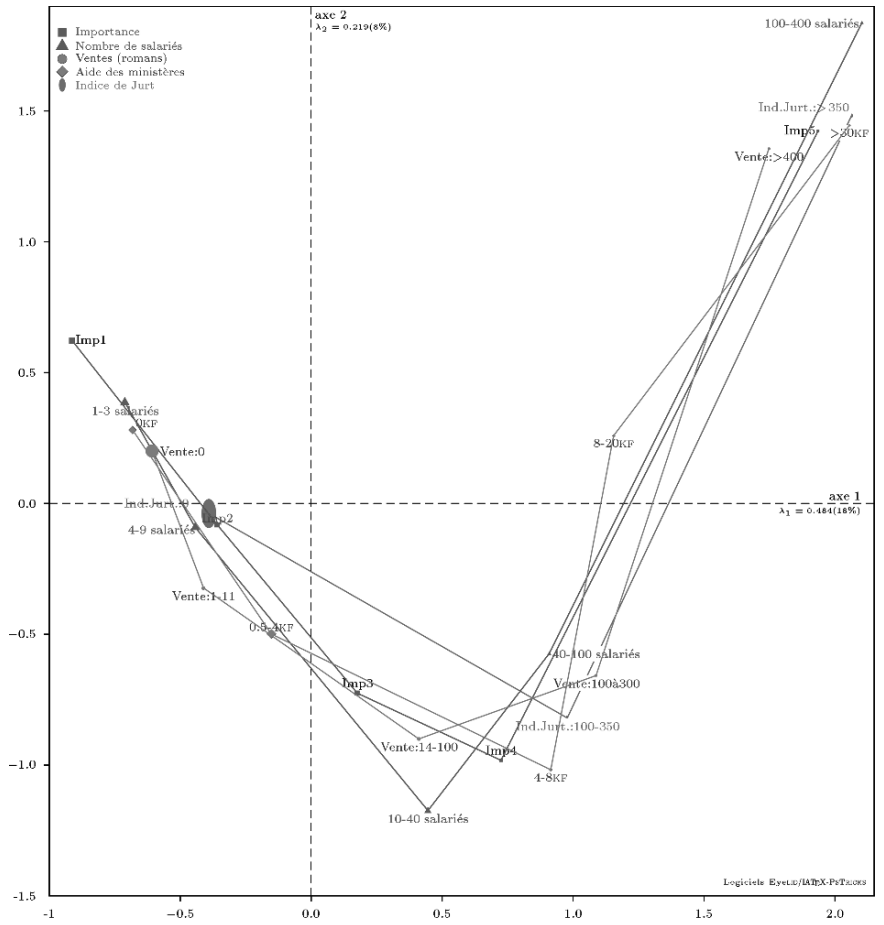

Fig. 2.4 (continued)

2.8 GDA in Bourdieu's "School"

To be complete, one should add that Bourdieu's colleagues and followers have made intensive use of GDA methods since the middle of the 1970s. Luc Boltanski (on "cadres" or "dénonciation"), Remi Lenoir (demographers, family policy), Patrick Champagne (French peasants), Monique de Saint-Martin (nobility), Annie Verger (artists), etc., have published chapters of books or articles based on MCA during the 1980s and the first half of the 1990s.

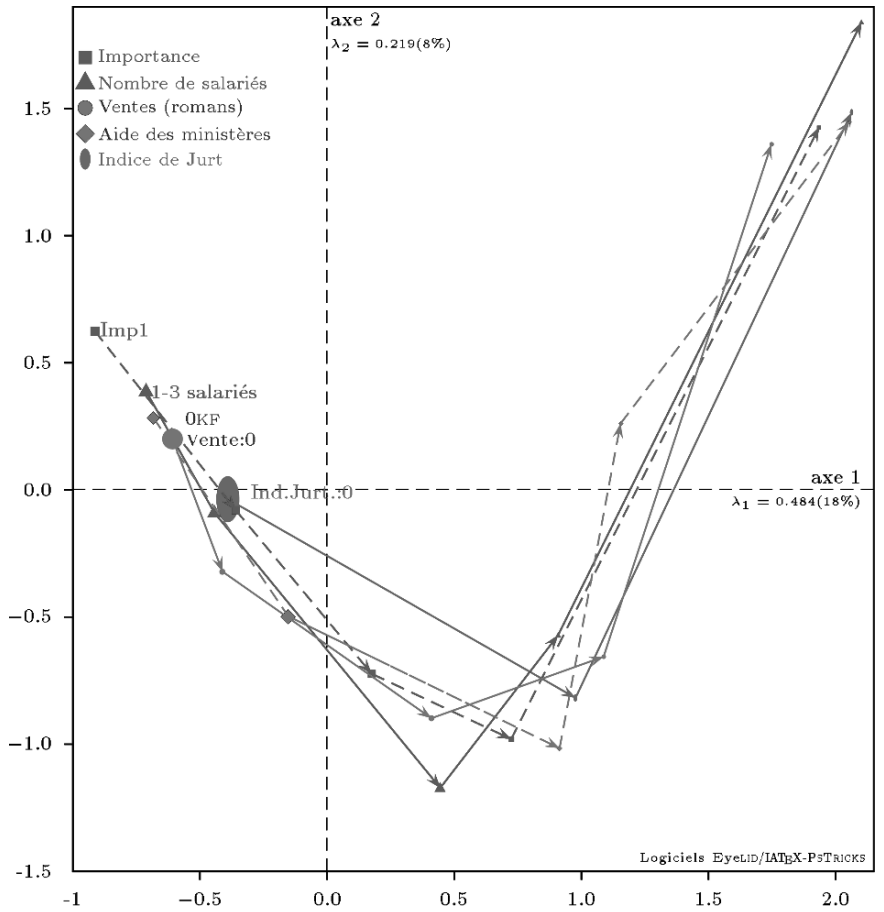

Fig. 2.4 (continued)

A new generation of research based on GDA was made visible through an article by Gisèle Sapiro about the field of French writers under German occupation published in *Actes de la recherche en sciences sociales* in 1996. In parallel, Swedish sociologists of education Donald Broady and Mikael Börjesson, inspired by Bourdieu's work, were intensively using CA and MCA in the 1990s. Lennart Rosenlund was simultaneously replicating Bourdieu's results about lifestyles in Stavanger in the 1990s as well. In 1998, a conference in Cologne, Germany gave way to a strong new alliance between Bourdieu, sociologists referring to Bourdieu's sociological theory and statisticians interested in Bourdieu's theory like Henry Rouanet and Brigitte Le Roux. Among the outcomes of this cooperation was the analyses published in *Actes de la recherche en sciences sociales* about the field

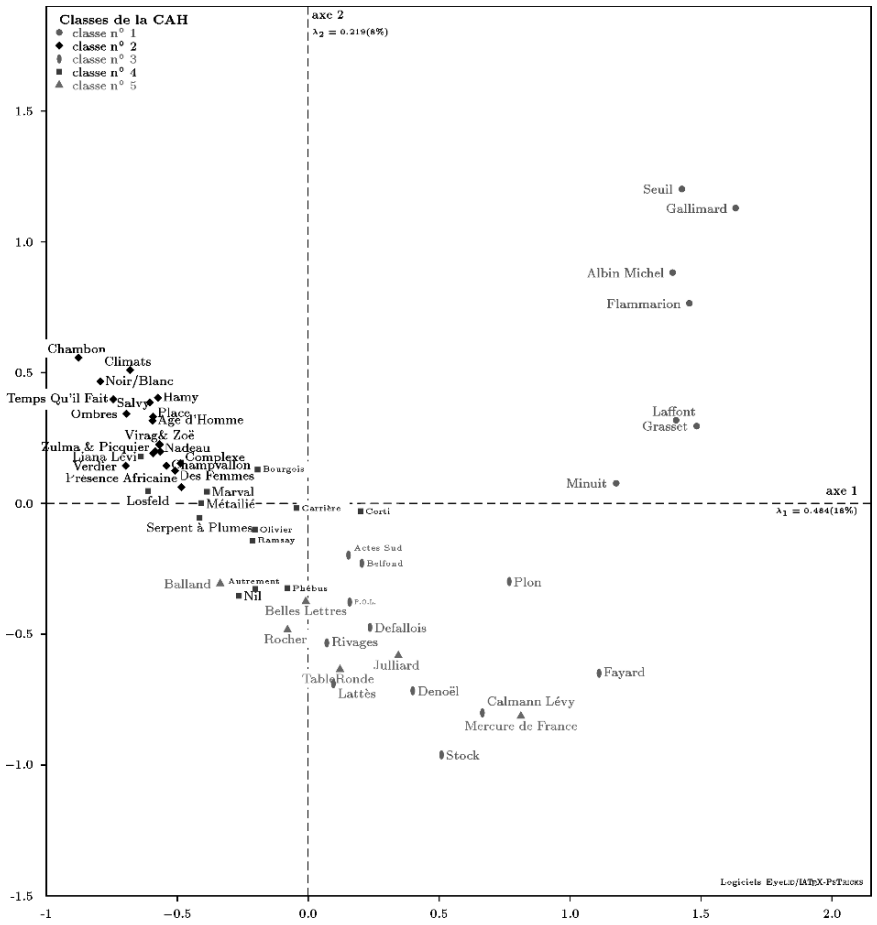

Fig. 2.5 The space of publishing houses in planes 1-2 and 2-3 (with resp. the classes of AHC and economic links)

of publishers mentioned and illustrated above (see Fig. 2.5), and an article by Hjellbrekke and others (2007) putting into practice recent theoretical and technical innovations in GDA (Figs. 2.6 and 2.7).

One can add several articles by Lebaron (2001), Duval (2004), and recent theses by Denord (2003), Börjesson (2005) and Hovden (2008) among many other applications (which could be the object of another chapter about Bourdieu's school and quantification in recent years). Very recently, an article about lifestyles in the UK using specific MCA, concentration ellipses, etc., was published by a group of sociologists including Mike Savage and Alan Warde, in cooperation with Brigitte Le Roux (Savage, Warde, Le Roux, & Rouanet, 2008).

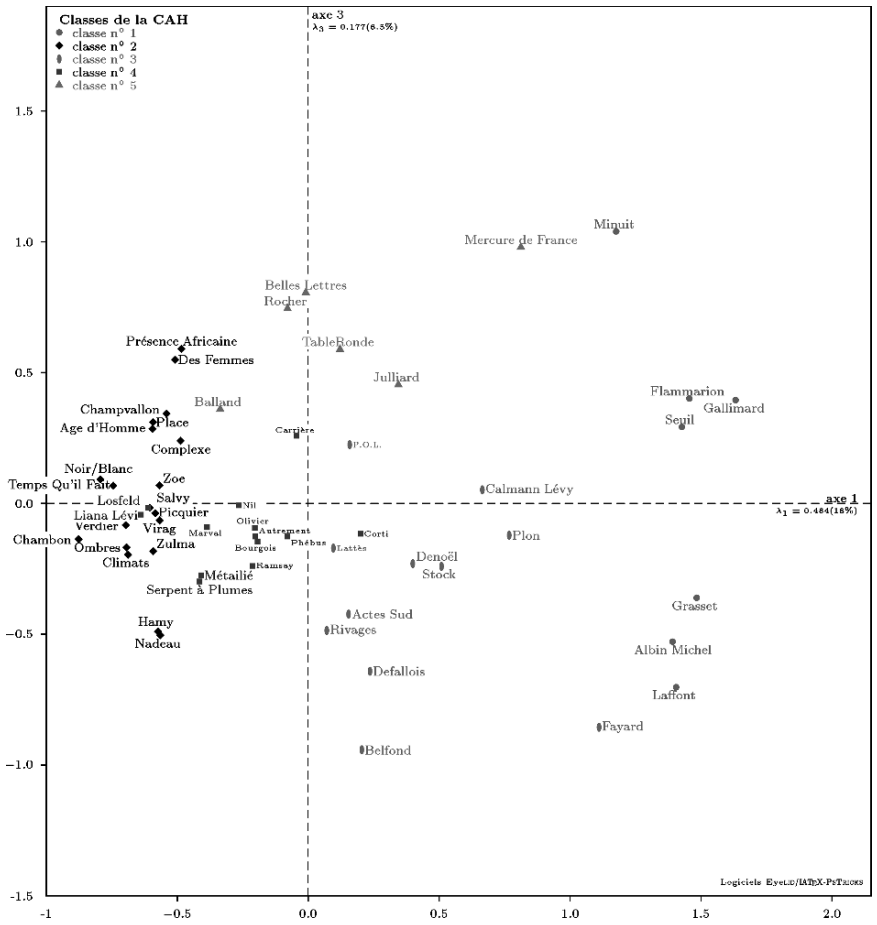

Fig. 2.5 (continued)

2.9 Conclusion

Bourdieu was conscious of the shortcomings of the dominant quantitative methods in social sciences (especially regression methods), which he discovered with Alain Darbel as early as in the beginning 1960s. He consciously found an alternative to these methods with the geometric modelling of data, which he practised around 30 years, from the beginning of the 1970s (with the exploitation of the "taste survey") until the late 1990s (with prosopographical data on publishers).

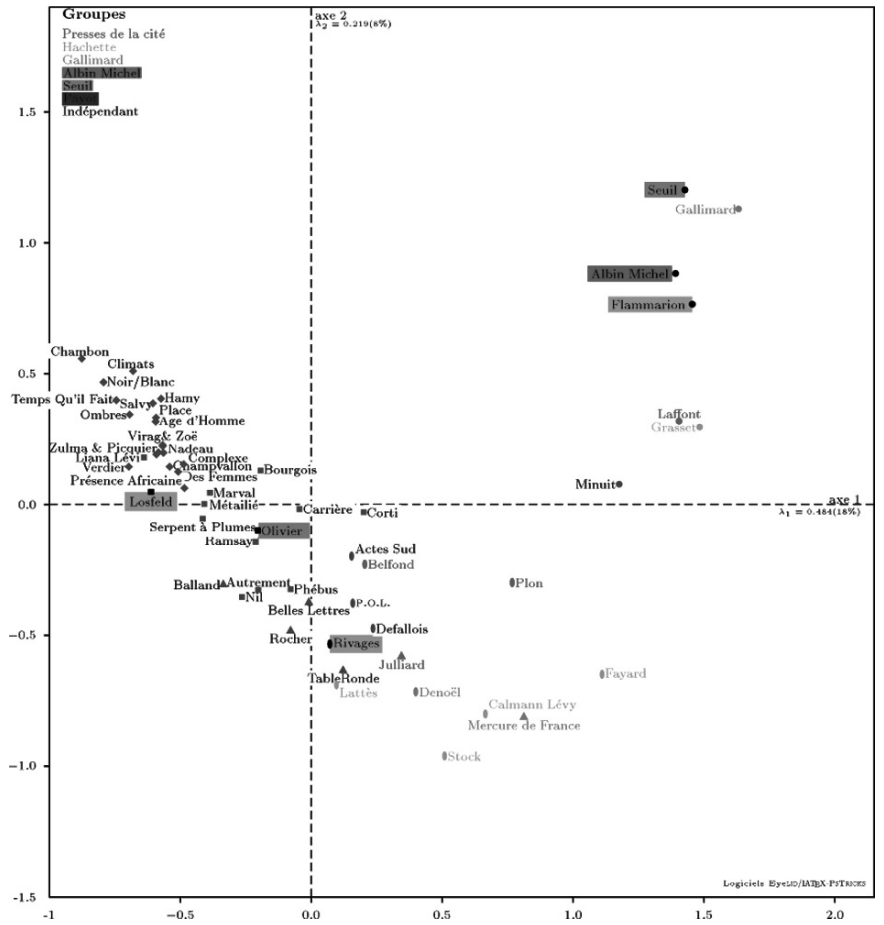

Fig. 2.5 (continued)

In his various texts based on the use of GDA, one also finds various research strategies:

- Discovering and *showing* the structure of a field
- *Showing* structural homologies between fields
- *Explaining* (e.g. positions and position takings) through in-depth studies of the cloud of individuals and the cloud of modalities and
- Analysing the possible *dynamics* of a field – i.e., through classification

Bourdieu did not approve nor practice the usual rhetoric of scientific publications, presented in terms of hypotheses, empirical data and results confirming

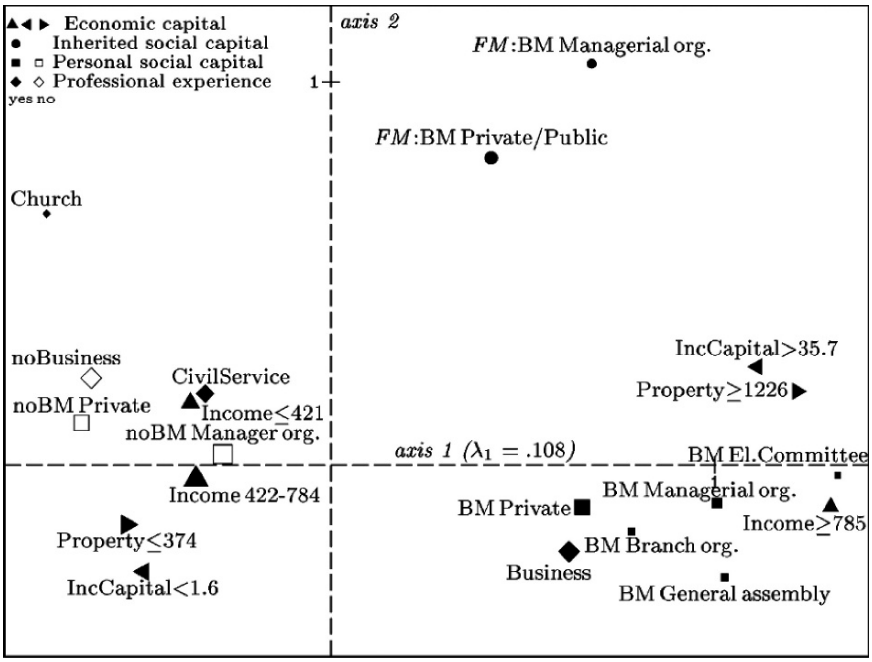

Fig. 2.6 Plane 1–2. Interpretation of Axis 1: 20 categories with highest contributions to axis. FM = Father/Mother, BM = Board Member. The sizes of markers are proportional to the frequencies of categories

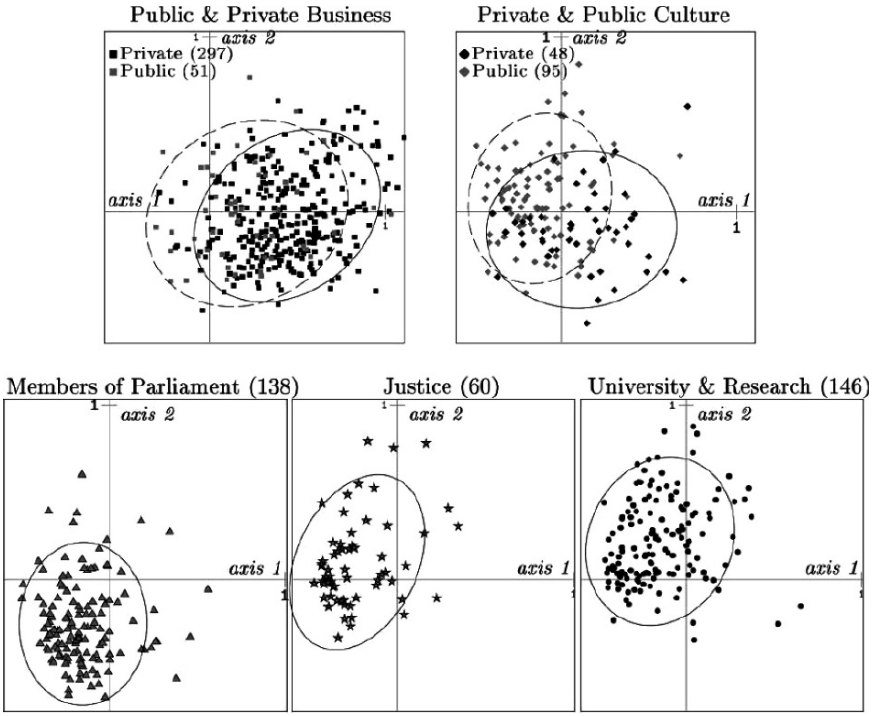

Fig. 2.7 Concentration ellipses around subgroups of interest in plane 1–2

or failing to confirm hypotheses. Neither did he always clearly separate between sociological and statistical interpretations, nor did he completely formalize his theory of fields and his sociological interpretation of statistical analyses. Probably, the way his statistical practice was integrated into his sociological writing did not encourage dialogue with other quantitative traditions and the clear understanding of what he did from a statistical point of view. Many researchers may find this to regrettable. Inferential procedures, which could have completed and strengthened his conclusions were not present. But Bourdieu was clearly always in search of a general geometric frame-model; he was enthusiastic about the possibility of future integration of regression into the framework of geometric data analysis. As such, it is clear that Bourdieu’s adoption of the geometric modelling of data has opened a very large space for a strong empirical sociological research program.

Chapter 3
Quantifying the Field of Power in Norway[1]

Johs Hjellbrekke and Olav Korsnes

Abstract Drawing on the work of Bourdieu and de Saint-Martin (1978), the purpose of this chapter is to objectivate elite structures of power and figurations through an analysis of the dominant capital structures and oppositions in "the Norwegian field of power." By way of specific multiple correspondence analysis, we seek to uncover the dimensionality of a structured space of relations, where the figurations of elite positions and the relations between them can be objectivated in terms of a field of power. Data originate from the Leadership survey 2000–2001, conducted by the Power and Democracy Project, and consists of 1,710 persons holding formal, leading positions in ten central sectors in Norway. The sample includes the top generals, bishops, leading university officials, higher civil servants, top politicians, supreme court judges, leaders of NGO's and the CEO's, NCEO's and chairmen of the largest private and public companies, including the cooperatives. Our analysis of the Norwegian field of power indicate that not only is Bourdieu's work valid outside French society, but also that "quantifying Bourdieu" may produce new insights about processes of societal change in other societies than the French one.

3.1 Introduction

Concepts like power, class and elite are usually founded on an assumption that society, the positions an individual occupies herein and the relations between individuals located in these positions, can be analysed as a multidimensional hierarchy.

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[1]This chapter is based on the work undertaken in the ongoing project on "the comparison of the French and Norwegian social spaces", headed by B. Le Roux and O. Korsnes, and has previously received funding from CNRS, France and the Norwegian Research Council. We wish to thank the other project members for their long-time and rewarding collaboration. They are not to be held responsible for the interpretations and arguments we present in this chapter.

K. Robson and C. Sanders (eds.), *Quantifying Theory: Pierre Bourdieu*,

The correlative image of society is also a society that is divided into and structured by divisions between hierarchically ordered positions, between which people are more or less mobile, and where the elites are the ones located at the top of the relevant hierarchies (Pareto, 1991 [1901]).

Criteria for elite differentiation have usually been related to societal sectors, specific societal task, levels of power or to functional criteria. For instance, Raymond Aron argued in favour of a division based on the function of ruling, and identified five subgroups of the elite: political leaders, government administrators, economic leaders, leaders of the masses and military chiefs (Aron, 1950: 9). Aron emphasized that an analysis of elites should be relational and comparative in orientation: "By the structure of the élite I mean the relation between various groups in the élite which is peculiar to each society. Indeed, although there are everywhere business managers, government officials, trade union secretaries and ministers, they are not everywhere recruited in the same way and they may either form one coherent whole or remain comparatively distinct from one another" (1950: 10).

Recent comparative studies confirm that Aron's assumptions still are relevant (Hartmann, 2007). Across Europe, the recruitment and the trajectories that lead individuals to given elite positions, and also the degree of intersectorial elite mobility, is subject to strong variation. Despite pushes towards globalisation or europeanisation, neither a universal, nor a European model, with a strong transnational elite component, can be found. Instead, based on specific ways of recruitment and the degree of sectorial circulation, Hartmann identifies three main types of elite formation across Europe:

- A French model, with homogenous elite recruitment through elite educational institutions (in particular the Grandes Écoles) and strong sectorial circulation ("pantouflage", i.e., over their career, the same persons circulate between, and occupy leading positions in multiple sectors)
- A British model, with relatively homogenous elite recruitment through elite educational or military institutions (in particular public/boarding schools, Oxbridge and Sandhurst), but with a limited degree of sectorial circulation
- A German model, with heterogeneous elite recruitment and limited sectorial circulation

According to Hartmann (2007), the German model is the most common in Europe, but differences *within* Europe are in many cases stronger than differences to non-European countries. As Mattei Dogan (2003a: 2) has pointed out, there are also good reasons to believe that "elite configurations in large part [reflect] the social, economic, cultural and political structures of society itself." And since society is multidimensionally structured, the space of the elites will most likely be so, too.

The purpose of this chapter is to objectivate these structures and figurations through an analysis of the dominant capital structures and oppositions in "the Norwegian field of power", drawing inspiration from Bourdieu and Bourdieu and de Saint-Martin's work (in particular Bourdieu & de Saint-Martin, 1978; Bourdieu, 1989b).

3.1.1 Main Questions

Against this background, four research questions are raised:

- What is the dimensionality of the Norwegian field of power, and what are these dimensions?
- What fractions of the field are the most open with respect to social mobility, and where is the intergenerational reproduction at its strongest?
- What is the degree of intersection and separation of the various configurations of field positions, and how are these configurations internally polarized?
- How does the configuration of the Norwegian field of power place itself in relation to Hartmann's three types of elite formation?

Our reasons for turning to Bourdieu's work is, firstly, that it offers a theory of the social space and of fields as *multidimensional* research objects, where social positions are located in multidimensional capital hierarchies. Secondly, it is based on a relational methodology, where field positions and figurations of positions must be interpreted relative to each other. Thirdly, in opposition to more essentialist' positions, there is a clear separation between phenomena as "real" and as epistemological objects, or between "classes" or "elites" on paper, and actual, mobilized "classes" or "elites". In contrast to Aron, the elite subgroups in our analysis are therefore not defined a priori, and unlike Dogan, we do not seek to confirm or reject a hypothesis about the existence of a specific "ruling class" (Dogan, 2003b), but to undertake an analysis where the objective relations between agents located in institutional positions with *formal* power, are mapped out.

3.2 From Dominant Civil Servants to the Tripartite System

The field of power can be seen as the actual status of the power relations between the agents or the institutions that are engaged in the struggles over, and the distribution of specific types of capital. Its structure, however, will also depend on the global value of the capital types and capital volumes agents have accumulated in *previous* struggles in the field. Therefore, any field analysis must include an analysis of its history.

Significant elements in the genesis of the Norwegian field of power were related to the formation of the new state at the beginning of the nineteenth century. The state apparatus and the political institutions were to be dominated by an integrated, well-educated and to a large degree self-recruiting group of lawyers and higher state officials, rich in cultural, academic and political capital, and politically unified in an opposition to Swedish rule. Family relations between the academics and the merchants, i.e. the economic elite, were also dense (Aubert, Torgersen, Tangen, Lindbekk, & Pollan, 1960). Although the recruitment to the administrative elite has grown more composite in terms of professions, it has remained rather homogenous in terms of educational qualifications (university education). In contrast, recruitment

to the political elite has clearly grown more heterogeneous, at least until the end of the twentieth century.

Unlike other European countries, Norwegian industrial capitalism did neither result in large, financial and industrial corporations, nor in long-lasting financial or industrial family dynasties. Opposition to the dominant configuration of elite positions would therefore not come from industrial capitalists or the bourgeoisie, but from the "counter-cultures"; a cultural and political opposition based on a coalition of farmers, religious leaders, teachers, urban liberals and workers (Rokkan, 1987). Recruitment to the business elite has also been rather heterogeneous, but more homogenous after the first national elite education in economics and business administration was established. However, this did not happen until after World War II, and although the first national technical university, which has served as a recruitment basis also for the business elite, was established in 1912, these elements of recruitment through elite educational institutions (including the universities) do not have the long history and have not produced the kind of homogenous elite recruitment one finds in e.g. France and Great Britain.

In the years after 1900, the labour movement mobilized politically, organizationally and culturally. The political field was restructured into a tri-polar space of relations, where the opposition between industrial/commercial groups and the labour movement became more dominant. New field oppositions, trajectories, positions and capital assets emerged, and persisting geographic, economic, cultural and religious conflict dimensions resulted in an increasing political fragmentation in the liberal and conservative parties.

Key components of the *current* industrial and political system originated in the immediate pre- and post-war years, with the Labour party as the dominant political actor. Extended co-operation and compromise, both in politics and in industrial relations, also known as the tri-partite system (see Hernes, 1978; Dølvik & Stokke, 1998), have been key characteristics of this system since the beginning in 1930s, when conflict gave way to compromise, both within politics and in industrial relations. Despite multiple pushes for increasing privatisation of state-controlled enterprises, the State has continued to play an active, "compensatory" and in some cases also a rescuing role.

To assume a strong opposition between political and economic capital in the field of power could thus be a double preconstruction of the research object. Not only may the central oppositions be structured along other capital dimensions. The internal heterogeneity in each of the capital hierarchies may also be considerable, and the structuring capacities of the capital types accordingly complex. Our first task is therefore to uncover the dimensionality of the field, and what these dimensions are.

3.3 Data

The data originates from the Leadership survey 2000–2001, conducted by the Power and Democracy Project, and consists of 1,710 persons holding formal, leading positions in ten central sectors in Norway (Gulbrandsen, 2002). Based

on institutional and positional criteria, only persons holding formal positions in larger corporations and firms, private and public institutions and various types of organisations were included in the survey. The sample includes the top generals, bishops, leading university officials, higher civil servants, top politicians, supreme court judges, leaders of NGO's and the CEO's, NCEO's and chairmen of the largest private and public companies, including the cooperatives. The survey was performed as a combination of personal (87%) and telephone (13%) interviews. Data on income, property and educational levels were retrieved from public records. The total response rate – 87.3% – is 20–25% points higher than in other Norwegian surveys undertaken in the 1990s. The sample is seen as statistically representative for the target population, and the overall quality of the data is also regarded as good (Gulbrandsen).

3.4 'Field' and Multiple Correspondence Analysis (MCA)

In Bourdieu's work, multiple correspondence analysis holds a privileged position because of its inherent relational properties:

> "I use Correspondence Analysis very much, because I think that it is essentially a relational procedure whose philosophy fully expresses what in my view constitutes social reality. It is a procedure that 'thinks' in relations, as I try to do it with the concept of field." (Preface to the German edition of *Le Métier de Sociologue*, 1991, cf. Rouanet et al., 2000).

MCA seeks to find a geometrical representation of the structures of a table or a matrix (see Le Roux & Rouanet, 2004). The chi-square distances between the row/column categories are calculated, the oppositions between row or column profiles maximised, and the latent structures or axes that best describe the oppositions between row or column profiles in the table are uncovered. Axis 1 describes the most dominant opposition, axis 2 the second most dominant etc. Each axis constitutes a dimension in a multi-dimensional *space*, and each row/column point (i.e. individual or category) can be located as a *point* within this space. Variables included in the construction of the space are *active* variables, and variables that are projected into this solution are *illustrative* or *supplementary* variables.

The interpretation is based on information about two *clouds of points*: the cloud of individuals and the cloud of categories. In the graphical representations, the clouds are usually projected onto factorial planes 1–2, 1–3, 2–3, etc. Each point's position must be interpreted relative or in relation to the positions of *all the other points* belonging to the same cloud. Categories with *similar* response profiles, i.e. that "share" the same set of individuals, are located in proximity to each other, and categories with *differing* profiles distant from each other. The *eigenvalue* is the part of the variance in the cloud projected onto a given axis. The amount of *inertia* (variance) "explained" by the same axis is equal to its eigenvalue divided by the *total* inertia in the cloud, and is given as a percentage. The *contribution* from a given category/variable to a given *axis* is an indicator of the category's/variable's importance to the construction of a main opposition in the data. Categories and

variables with high contributions (values > mean contribution) are emphasised in the interpretation.

In the cloud of individuals, *concentration ellipses* can be drawn around the categories' mean points. The axes of the ellipse have a length of two standard deviations from the mean point of the category. In a bi-plane, each ellipse includes 86% of all individuals in a two-dimensional normal distribution.

3.5 Findings and Analysis

Below, by way of MCA, we seek to uncover the dimensionality of a structured space of relations, where the figurations of elite positions and the relations between them can be objectivated in terms of a field of power. Thirty-one variables, put into five main groups and with 77 active categories, have been retained for the field construction (Table 3.1).

The variables have been coded so that no single block of capital indicators *a priori* can dominate the analysis (see Hiellbrekke, Le Roux, Korsnes, Lebaron Rosenlund & Rouanet 2007 for further details). The specific MCA yields three main dimensions to interpret, summarizing 75% of the inertia (Table 3.2).

There are thus three main dimensions in the field.

Table 3.1 Active variables in the analysis, organized in five main groups. Thirty-one variables, 77 active categories

Economic capital	Cultural/educational capital, personal and inherited
Personal income – 3 categories (−25%, 26–74%, 75%+)	Father's educational level – 5 categories
Income on savings, shares etc. – (−25%, 26–74%, 75%+, negative)	Partner's educational level – 5 categories
Registered property – (−25%, 26–74%, 75%+)	Own educational level – 5 categories
	Studies abroad – (1 year, 2 years+, no)
	Worked abroad – (yes/no)

Personal social capital (coded yes/no)	Inherited social capital (coded yes/no)
Board member, private company	Father/mother, board memb., priv./publ. company
Board member, general assembly	Father/mother, board memb., managerial org.
Board member, election committee	Father/mother, board memb., trade union
Board member, public company	Father/mother, board memb., voluntary org.
Board member, managerial org.	Father/mother, member of parliament
Board member, branch org.	
Board member, trade union	
Board member, voluntary org.	

Professional experience/field trajectories (coded yes/no)	
Civil service	Defense
Research	Organisations (incl. NGOs)
Politics	Church
Justice	Media
Business	Culture

Table 3.2 Variance of axes, modified and cumulated rates

	Axis 1	Axis 2	Axis 3
Variance of axes (eigenvalues)	0.108	0.082	0.066
Modified rates	44%	20%	11%
Cumulated modified rates	44%	64%	75%

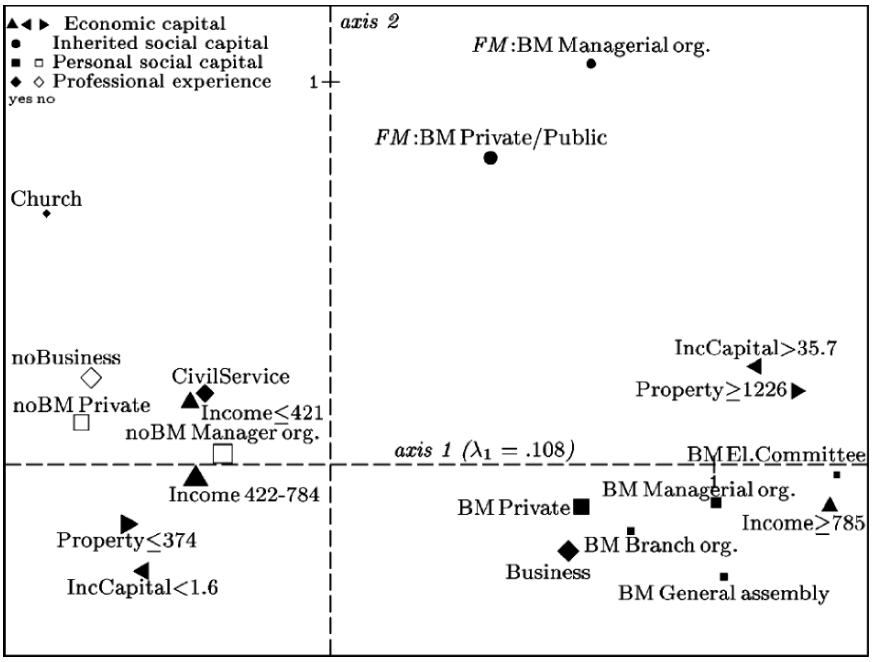

Fig. 3.1 Plane 1–2. Interpretation of Axis 1: 20 categories with highest contributions to axis. FM = Father/Mother, BM = Board Member. The sizes of markers are proportional to the frequencies of categories

The categories with the highest contributions to axis 1 (summarizing 44% of the inertia) are depicted in Fig. 3.1.

Figure 3.1 shows that Axis 1 primarily is an *economic capital axis*. High volumes of economic capital (to the right) are systematically contrasted to low economic capital volumes (to the left), and work experience from business contrasted to no such experience. In addition, *inherited* social capital also linked to the business world, indicating a familiarity with economic executive power, further reinforces the opposition found along the axis.

The 26 categories with the highest contributions to axis 2 (20% of the inertia) are shown in Fig. 3.2.

From Fig. 3.2, we see that Axis 2 describes both an opposition *between political and cultural capital* (cf. the position of "Politics"), and between high volumes (to the right) and low volumes (to the left) of inherited social and cultural capital assets. The axis can therefore be interpreted as a field *seniority* axis, i.e. as describing a polarity

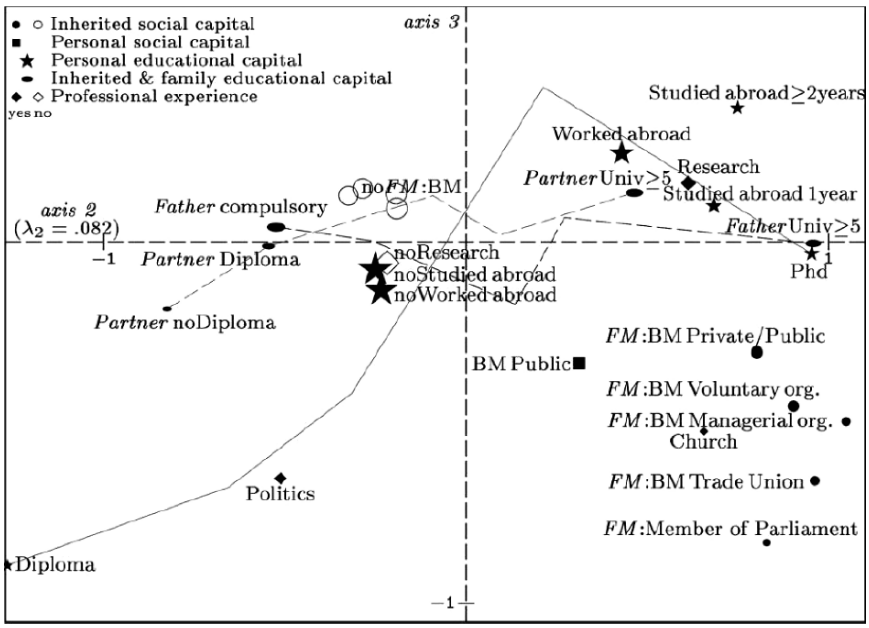

Fig. 3.2 Plane 2–3. Interpretation of Axis 2: 26 categories with highest contributions to axis. FM = Father/Mother, BM = Board Member. Categories of Own, Partner's and Father's educational level are linked by lines

between "the established" and "the newcomers", where high volumes of cultural capital seems related to "the established" and political capital to "the newcomers". Indicators of inherited capital assets are systematically located to the right, and categories indicating low personal and no inherited educational and social capital assets to the left in the figure, where also the mean point for political experience is located. Inherited *social* capital assets are thus clearly linked to trajectories that in part depend upon the accumulation of substantial volumes of educational and/or cultural capital. Furthermore, over two generations, inherited social capital is not only reproduced; it also seems readily convertible into educational and cultural capital. In this respect, the trajectories of the offspring are seemingly also converging, cf. the proximity between the categories indicating parental board memberships in trade unions as well as in managerial organisations, and private and public business. Inheritance factors may thus make the opposition between cultural and political capital more complex than what a straightforward interpretation of the axis at first could lead one to believe (cf. the opposition between the three mean category points "Politics" versus "FM, Member of Parliament" and "FN: BM Trade Union").

The 25 categories with the highest contributions to Axis 3 (11%) are shown in Fig. 3.3.

Figure 3.3 shows that Axis 3 is more clearly a capital *structure* axis, where high volumes of inherited social capital and low volumes of educational capital are contrasted to high volumes of both educational and inherited economic capital.

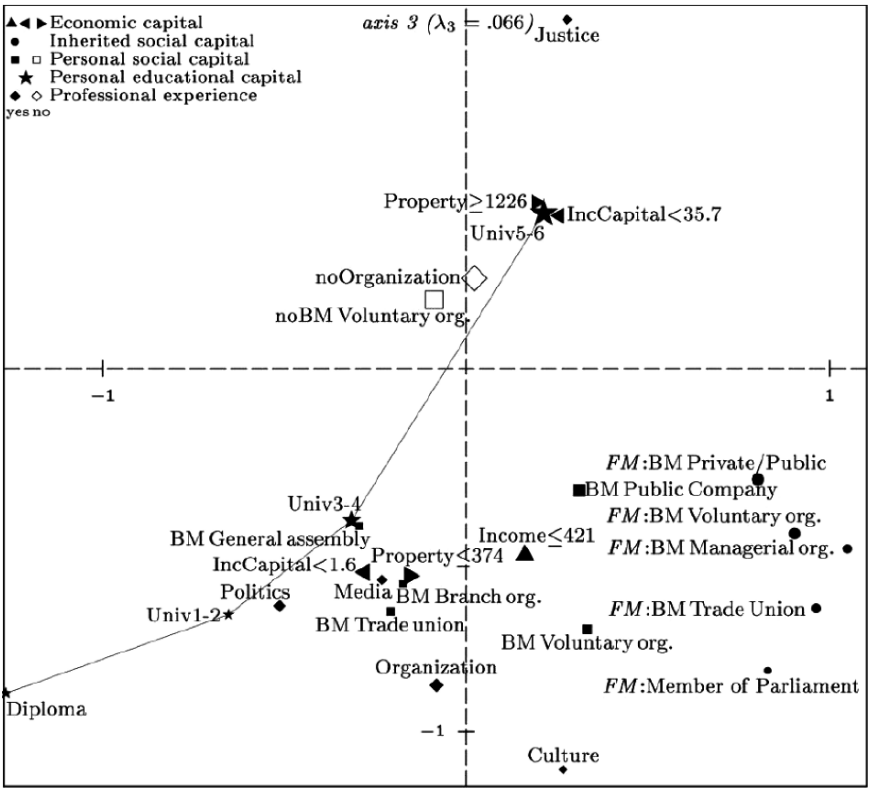

Fig. 3.3 Factorial Plane 2–3. Interpretation of Axis 3: 26 categories with highest contributions to axis. The categories on own educational level are linked by a line

The axis also describes an opposition between persons with work experience from the political/organisational/cultural sectors and the judicial sector. The results from the analysis of axis 2 are modified in some important ways by axis 3. Firstly, the mean points for indicators on personal and inherited social capital assets are all located in lower sectors of the figure, but in proximity to mean points indicating *lower* personal educations and lower incomes and property levels. The social capital structures are therefore more complex than a two-axis solution could reveal. Secondly, we also find a figuration where social capital assets in part are inherited, but where educational capital assets are not, and where field trajectories typically include experience from politics, various types of organisations and institutions (including cultural), the media and/or the church. Although the political field may be the most open with respect to social mobility, there are still limits to the flux. Thirdly, the axis separates agents with judicial work experience and economic capital assets that in part may be inherited (cf. the contributions from the Income on capital and Property variables), from agents with work experience from a configuration formed by professions in the church, the cultural sector, in politics and in

organisations. Once agents embark on one of these two main trajectories, the field logic evidently pulls them even further apart; career shifts scarcely occur.

So far, two of our initial questions are answered: The field is a three-dimensional field, with one economic capital axis, one (primarily) seniority axis, where social and cultural capital is opposed to political capital, and one social capital versus economic capital axis. The political sector is, seemingly, also more open than the others.

When the 48 elite positions themselves are projected into this three-dimensional space as a illustrative variable, this interpretation finds further support.

Figures 3.4 and 3.5 show these positions' locations in the Norwegian field of power. In factorial plane 1–2 (Fig. 3.4), three main figurations are revealed: business positions are systematically located in the two right quadrants, political positions in the lower left quadrant, and academic positions, positions in the church, in the central administration and in the judicial system in the upper left quadrant.

Horizontally, along axis 1, we find a clear-cut opposition between the business positions and all the others, but also clear indications of *internal* business polarisation; the CEOs and chairmen of the public companies and the COOPs, i.e. careers that in part also depend on the accumulation of political capital, are located much closer to the political positions. Vertically, along axis 2, there is also a distinct opposition between the political positions and the academic and religious positions, the latter being among the *least* accessible positions for newcomers to the field.

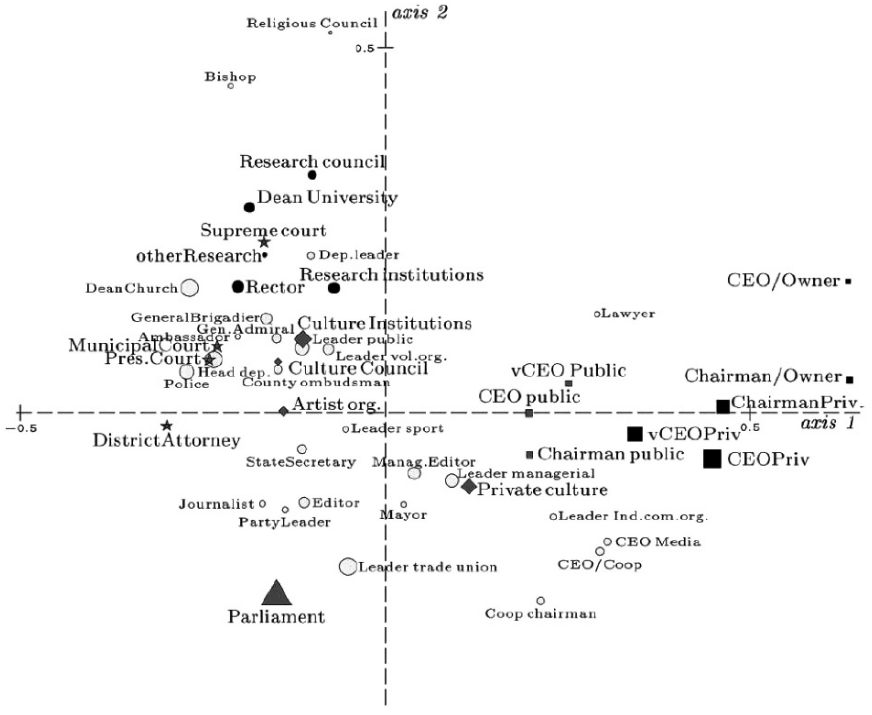

Fig. 3.4 Forty-five mean category points associated to positions in factorial Plane 1–2

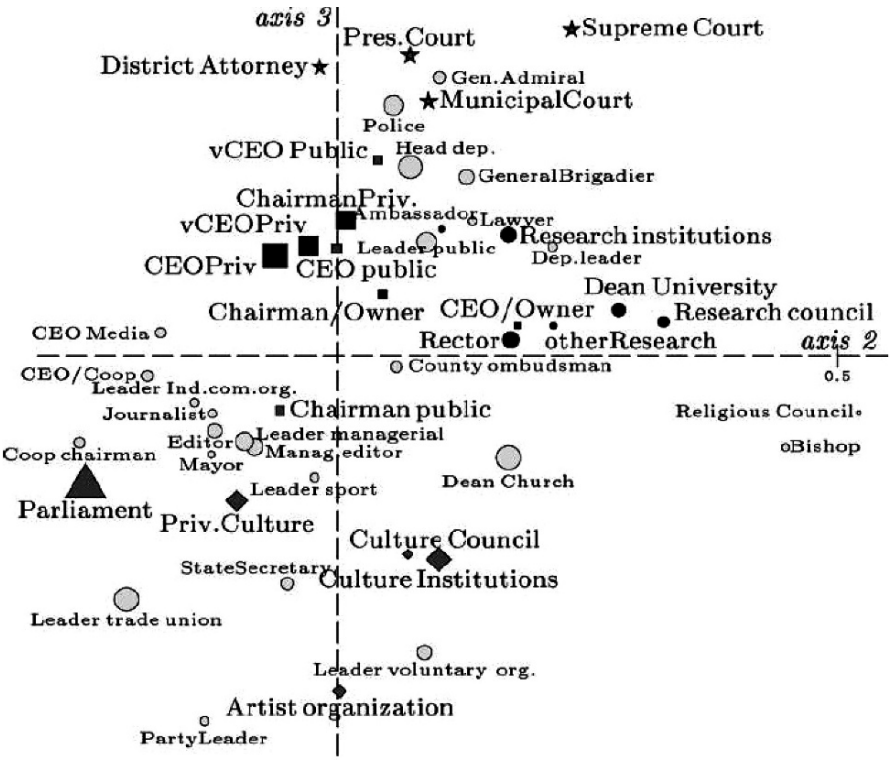

Fig. 3.5 Forty-five mean category points associated to positions in factorial Plane 2–3

The distribution of the positions along axis 3 (vertical axis in Fig. 3.5) reinforces the interpretation we made above. A figuration of political/organisational positions (lower left quadrants), including the politically appointed leaders of public cultural institutions, stands in clear opposition to a figuration of judicial and military positions (upper left quadrants). It would not be surprising if more frequent career shifts and tendencies towards multipositionality (Boltanski, 1973) are stronger in the two lower sections of the space than the others.

We have already hinted at a business internal opposition along axis 1. But how are the other figurations affected internally by the various capital axes? What are the most homogenous and heterogeneous figurations, and how do the different axes internally polarize the various subgroups in the field? In order to answer this question, we have regrouped the sample into seven major categories – Private and Public Business, Private and Public Culture, MPs, Justice, University & Research – and drawn concentration ellipses around each mean category point in the (global) cloud of individuals (see Hjellbrekke et al., 2007).

Figures 3.6 and 3.7 show the individuals' (belonging to these seven categories) positions in factorial plane 1–2 and 2–3. Each ellipse summarize 86% of the individuals in the respective figuration, i.e. 2 SDs in a two-dimensional distribution, and each dot show an individual's position in the factorial plane.

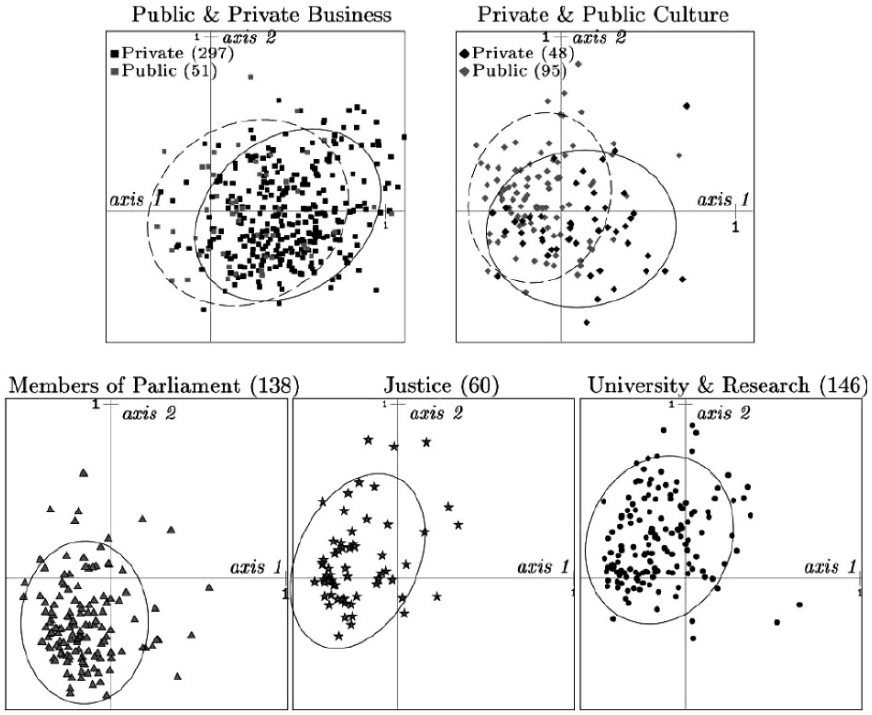

Fig. 3.6 Concentration ellipses around subgroups of interest in Plane 1–2

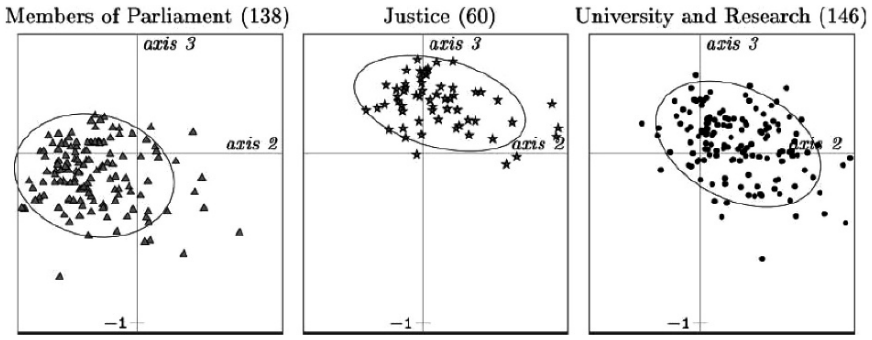

Fig. 3.7 Concentration ellipses around subgroups of interest in Plane 2–3

In factorial plane 1–2, we find a clear similarity between the CEOs and chairmen in private and public businesses. But even so, the "Public business" ellipse is clearly nearer the overall centre of gravity in the cloud. Furthermore, an opposition between "the established" and "the newcomers" proves to be internally polarising in several of the figurations. Whereas "Private culture" is stretched along axis 1,

the economic axis, the "Public culture" ellipse is stretched along axis 2, indicating an internal polarization with respect to social origin. The latter's similarity to the "University & Research" ellipse is also clear. The clearest internal opposition along axis 2, however, is found among the judicials. In plane 1–2, the ellipses thus separate clearly between four main forms of capital: economic capital, political capital, personal and inherited educational/cultural and also inherited social capital.

The degree of intersection and separation does, however, become clearer if we also examine the ellipses in factorial plane 2–3. Two ellipses that were partly intersecting in factorial plane 1–2, the ellipses for the MPs and the Judicials, are strongly separated in factorial plane 2–3. Furthermore, the separation between MPs and "University/Research", two ellipses that also were partly intersecting in factorial plane 1–2, are also clearly separated in factorial plane 2–3. In this plane, the judicial positions are also identified as a more homogenous group than the others, differing the most from the MPs and the Public cultural positions, i.e. positions that usually also necessitates the accumulation of political capital.

This result may not only suggest that the profile of the judicial groups is more distinct, and more difficult to gain access to than the others. What this analysis also reveals, is that in the case of Norway, the trajectories of individuals who run for public office (*in casu* political positions at a national level) are clearly separated from the trajectories of the individuals who pursue a public judicial career. The contrast to the situation in e.g. the United States, where the latter also are part of the political system, is obvious. Whereas the position as a District Attorney in the US can be a political stepping stone, this is *not* the case in Norway. With this contrast in mind: How does the above revealed field configuration place itself in relation to Hartmann's three types of elite formation in Europe?

3.6 Lifelong Careers and Restricted, Intersectorial Circulation?

The subtitle of Bourdieu's "The State Nobility" is telling: "Elite Schools in the Field of Power". Whereas the main oppositions in the French field of power also can be described in terms of oppositions between the Grandes Écoles, this is clearly not the case in Norway; as our analyses show, elite schools do not structure the field of power; they are neither the only, nor even the *principal* channel of mobility into the field. In this respect, in Norway, cultural capital is clearly less dominant, and has a weaker structuring power than what is the case in France. Furthermore, the high degree of intersectorial mobility between administration, business and politics that is typical for France, is not a predominant feature in Norway; historically, mobility between administration and politics has been atypical, if not as atypical as movements between justice and politics.

Nor do the majority graduate from a few select institutions, like the "Clarendon Nine", Oxford and Cambridge, as they do in the British model. However, lifelong careers has been typical both within business, research, the church, the judicial

system, the military and the civil administration; if occurring, cross-sectorial career shifts have usually taken place at the end of a long, sector-internal career.

At first sight, the Norwegian case may seem to be closest to the German model, with no common elite education and separated careers. Although some schools and educations are more important than others, the overall majority of the elite are recruited from a wide spectre of educational institutions. Like in Germany, inter-sectorial circulation has also been relatively rare.

Lately, however, tendencies towards what is seen as an increasing "pantouflage" has been the object for attention and criticism. The Labour Party has been at the centre of this controversy, because former Labour party politicians and cabinet members in increasing numbers have "changed sides", and taken positions as CEOs in private and semi-private companies, in the managerial association (NHO), in stock broker firms, or have gone to or started lobbying firms. But unlike France, these trajectories are primarily dependent on the conversion of *political*, and not educational capital assets; accumulated political capital may now give access to previously "forbidden" positions.

These historically new trajectories may indicate that a more complex field structure is emerging, that intersectorial mobility is increasing in parts of the field, and that the borders between the political and the economic field have become more blurred. Increasing attention has also been given to the formation and reproduction of political family dynasties, with substantial amounts of inherited and personally acquired social capital assets, and to the formation of exclusive, cross-cutting Labour party networks, where politicians and CEOs have exerted a considerable influence on Norwegian oil- and energy politics, and also favoured a deregulation and semi-privatisation of the industry. In his discussion of the political field, Bourdieu conceptualized these types of assets as *political* capital, and emphasized that its accumulation and value went hand in hand with its degree of institutionalization:

> [P]olitical capital is increasingly institutionalized in the form of available jobs, and It becomes more profitable to enter the apparatus – quite the opposite of what happens in the initial phases or in times of crisis (in a revolutionary period, for example) when the risks are great and profits reduced (Bourdieu, 1991: 172–202, see also Bourdieu, 1994; Eyal, 2005)

In this way, Norway combine elements from both the German and the French model, but where intersectorial circulation primarily is dependent on *political* and not cultural capital (Bourdieu, 1994), and primarily also restricted to members the above identified figuration of political and organisational positions.

3.7 Concluding Comments

Bourdieu's work has often been criticized for not being valid outside France. The debate has been flawed by some critiques failure to separate clearly between empirical and theoretical generalizations (e.g. Alexander, 1995; Chan & Goldthorpe, 2007a). Obviously, the outcome of empirical analyses of power

structures in e.g. Norway cannot be predicted from analyses of French data. This, however, does not imply that Bourdieu's theoretical understanding and interpretation of French empirical results is irrelevant to the understanding and interpretation of the outcome of empirical analysis in a different social setting.

However, in order to be so, some important methodological and theoretical consequences of the outlined contrasts between Norway and the US, France, the UK and Germany must be kept in mind. Firstly, they highlight an important methodological principle: choosing 'nation' as *analytical framework* may not only serve to study the variety of field structures, trajectories and habituses, but also to explore exactly how important processes of nation-building (and processes supposed to erode nation-states) are in this respect, and should *not* be confused with choosing 'nation' as an explanatory factor. As units of analysis, nation-states may be characterized by specific and distinctive relations between a common set of variables. These relations will most likely also generate national variations both when it comes to field structures, field trajectories and, in consequence, the structures of the habituses of agents located in comparable, but *not* identical, positions and/or societies. Not to acknowledge this fundamental difference may easily lead to flawed conclusions, as the above cited claims against the generalisability of Bourdieu's work demonstrate.

Also, these examples highlight a risk inherent in all types of sociological theorizing where universalistic models or classification schemes are specified, and subsequently attempted validated by applying them to the largest possible number of cases, without separating between research objects as "real" and as epistemological objects. The fact that a given concept in two different contexts may refer to two clearly different phenomena, will not only be lost. This type of theorizing is also based on inherent claims for a new version of convergence theory, where, as pointed out by Peter Wagner (2001: 7), there is a "…conceptual linkage between the theorizing of modernity and modernity's historicity". If basic concepts and theoretical approaches are to be applicable in cross-national studies, this fundamental distinction must be upheld. If not, the multidimensionality and pluralities of the research objects will not be recognized, and their concrete temporalities and specific locations also ignored. One of the major strengths in Bourdieu's research program is exactly the ability to uphold this distinction, while at the same time recognizing the dialectical relations between universal and societal factors (Sorge, 1995). Hopefully, our analysis of the Norwegian field of power has proved that not only is Bourdieu's work valid outside French society, but also that "quantifying Bourdieu" may produce new insights about processes of societal change in other societies than the French one.

Chapter 4
The Homology Thesis: *Distinction* Revisited*

Philippe Coulangeon and Yannick Lemel

Abstract The theoretical model of The Distinction is a basic reference in the sociology of lifestyles (Bourdieu, 1979). This model is fundamentally structured by two concepts, structural homology and habitus. Habitus are cultural structures that exist in people's bodies and minds and shape a wide variety of their behaviours, beliefs and thoughts. Structural homology is the assumption that social class structure is linked to the structure of aesthetic preferences through a one-to-one correspondence, an isomorphic relation. People's tastes are seen as channelled by their position within the class structure, which is defined by the volume of capital and its "composition" and are organised in line with a "highbrow/lowbrow" opposition. Here, we will focus on the structural homology aspect and limit ourselves to analysing to what extent it is possible to univocally relate kinds of activities the French do with their social positions. We shall empirically examine the principles of organisation of the activities, just as they were described throughout a survey on cultural and sports practices of the French, and then evaluate to what extent a structural homology between practices and social positions is still observable.

4.1 Introduction

The theoretical model of *Distinction* is a basic reference in the sociology of lifestyles (Bourdieu, 1979). This model is fundamentally structured by two concepts, structural homology and *habitus. Habitus* refers to cultural structures that exist in

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* This paper summarises a working paper whose details can be found in Coulangeon and Lemel (2007b).

K. Robson and C. Sanders (eds.), *Quantifying Theory: Pierre Bourdieu*,

people's bodies and minds and shape a wide variety of their behaviours, beliefs and thoughts. Structural homology is the assumption that social class structure is linked to the structure of aesthetic preferences through a one-to-one correspondence, a kind of isomorphic relation. People's tastes are seen as channelled by their position within the class structure, which is defined by their volume of capital and its "composition" and are organised in line with a "highbrow/lowbrow" opposition.

Distinction has been subjected to many comments and criticisms. Some radically individualistic arguments denied the social dimension of taste and lifestyles (e.g. Featherstone, 1991 or Beck, 1992), and the "omnivore/univore" hypothesis (e.g. Peterson & Simkus, 1992) judged that the main social distinction today is a matter of cultural diversity rather than "highbrow or lowbrow" culture. Moreover, many other critiques appeared. Here, we will focus on the structural homology aspect and limit ourselves to analysing to what extent it is possible to relate kinds of activities in which the French participate with their social positions. We shall empirically examine the organisation of the activities, just as they were described throughout a survey on cultural and sports practices of the French, and then evaluate to what extent a structural homology between practices and social positions is still observable.

4.2 Data and Methods

4.2.1 Data

The survey on "cultural and sports participation" (*Participation culturelle et sportive*) constitutes the variable part of the May 2003 issue of the *EPCV* survey (*Enquêtes Permanentes sur les Conditions de Vie des Ménages* or "The Continuous Survey of Living Conditions" as it translates to in English) that is carried out three times a year by the INSEE, the French statistical office. The random sample is representative of individuals aged 15 and over who live in households in metropolitan France (N = 5,626).

The questionnaire includes items on a wide variety of practices, including reading, listening to music, cultural outings, television viewing, artistic hobbies and sports activities. Generally, the questions are retrospective in nature, asking about the practice of an activity over the past 12 months (professional and school obligations excluded).

4.2.2 Activities and Lifestyles

Should one study "tastes" or "activities"? There are some debates about this question. Obviously, what people do might not reflect what they would do if they were free from various types of constraints. Without denying the interest in studying

tastes, we may underline that their assessment requires complex and costly observation protocols – very seldom implemented in practice.[1] Our focus of interest here is in what people *do*. As such, we will use the activities as our starting point and try to single out groups of people who appear to engage in similar activities and share the same sort of lifestyle.

How precisely should the activities be defined? Too widely defined categories may obscure significant details. We may have chosen to limit the scope of investigation to the few domains known in detail through the survey but, in this way, we could not have a more general view, which is precisely our goal.[2] To realize our objective, we have tried to cover the various domains examined in the survey, taking into account whether these activities are more or less frequent. We study a set of 44 activity scales (from 0 to a maximum of 4), representative of all the domains studied in the survey. Their list is given in Appendix 4.1. We cannot exclude the possibility that the conclusions we will draw out are partly artefacts of the activities we have chosen to examine, but due to the nature of the results obtained, such an outcome seems improbable.

Various methods can be considered to group individuals presumably having similar activities and "lifestyles". One can choose certain practices characterized to be typical of a lifestyle. Thus, activities like visiting museums and going to classical music concerts are thought to be the distinctive mark of a "highbrow lifestyle". This method allows the definition of the lifestyles through their predefined construction, but its drawbacks are its arbitrariness and the risk of giving too much importance to marginal phenomena. Moreover, the approach hardly corresponds to the structuralist interpretations of analyses like Bourdieu's.

In this chapter, we favour an alternative approach. We implemented statistical methods of cluster analysis – hierarchical clustering methods, in particular, the K-means method. These methods were specifically designed to gather or 'cluster' observations – here, the individuals – according to similar values over sets of variables (in our case, the set of 44 indicators described in Appendix 4.1 or the summaries that could be done of them through data reduction tools such as factor analyses). Like all statistical methods, these ones present their own peculiarities and the results might be sensitive to their technical specificities. We may reasonably consider that there is a structuring pattern which is independent from our statistical methods (see Appendix 4.2).

[1] See Holt (1997) for reflections on the adequacy of studying tastes with a closed-question survey.

[2] Elsewhere, we examine music listening, when the kinds of music listened to is known through the survey. The overall conclusions are closely akin to the ones we shall present here (see Coulangeon & Lemel, 2007a).

4.2.3 How to Define Social Positions?

In *Distinction*, Bourdieu maps lifestyles in a two-dimensional social space defined by the "global capital" and its economic and cultural components. Three items are available in the survey to evaluate the cultural and economic capitals of respondents: their occupation, their education level, and family income.

- The personal education code is the one suggested in Hollmeyer-Zlotnich and Wolf (2003). A scale will be associated to it according to how many years of studies are required in order to obtain the corresponding level. Some sensitivity studies suggested that the results are quite independent from the exact values that are selected to construct the scale, as long as the ranking and the order of magnitude are respected.
- The family income will be related to the number of home members in order to constitute a standard-of-living indicator.
- Occupations are classified according to a French code (different from ISCO), the only one available. Different scales are available to score these occupations by "prestige" or "occupational status" but they seem to structure themselves around the same hierarchical global dimension that can be found through every scale (correlations around 0.90). Among them, we use an occupational status scale based on homogamy data as described in Lemel (2006).

Later on, we shall examine how these three items are organized and to which extent they can be useful to construct a space of social positions in Bourdieu's tradition. We will then compare the social positions of lifestyles.

4.3 In Search of Lifestyles

In order to have an overview of the way the space of practices is organised, we will start by summarizing the results of a principal component analysis (hereafter *PCA*) of the population on all the 44 indicators of practices. In that analysis, the first component is positively correlated to all practice variables, except in two or three cases, among which is TV viewing (this component explains 13% of the variance). The second component (6%) refers mainly to sports, under the particular form of "passive sports" (reading newspapers, attending sports shows). The meaning of the third component (4%) is less certain; it highlights the reading of regional daily newspapers first, then of newspapers and magazines but the practices that contribute to define it change from one sub-population to another. The other components appear rather specific.

So, whatever the pair of activities considered, one is more likely to practice an activity because one already practices the other. There is a cumulative process. If we group together individuals who engage in similar activities, the results must obviously be in coherence with this fundamental aspect. Yet, this "volume" dimension

is not enough to define these groups of similar persons. On the one hand, although strongly one-dimensional, the space of practices is at least two-dimensional, and most of all, combinations of various activities may very well correspond to a same level of "activism". We will elaborate on the accumulating process before constructing the lifestyles.

4.3.1 The Cumulative Process

So, the first and striking result is that, apart from a few exceptions, the 44 activities do not exclude one from the other. We can imagine at least two ways of interpreting such a result. One possibility is direct causality: practicing more of activity A entails practicing more of activity B, for example. In that present case and due to the large number and diversity of the activities studied here, such explanations do not seem to be uniformly applicable.

The other explanations refer to the existence of some causality factors that would similarly influence each activity. These factors could be the persons' social or demographic characteristics, of which the consequences would be alike whatever the activity. The "cumulative" effect would thus be partly an artefact of construction. It could also be a latent factor of some other nature – to be specified – but that would not directly refer to socio-demographic characteristics.

We can think, for instance, of age as a common factor of causality. Here, a large part of the activities studied require physical ability, which of course changes with age. They often require going out, disturbing the well-known tendency of the elderly to stay home. But these possible effects of age do not explain the result. It remains unchanged when the analysis is limited only to the elderly, the young or middle-aged persons. We can compare the results of factor analysis – PCA as well as Generalized Correspondence Analysis – carried out separately for these three sub-populations and calculate the correlations between the extrapolations to the whole sample of results: they are of 0.99 for the first component of a PCA. The same result can be observed if instead of age, we examine the persons' education level. The first dimension of the universe of practices has a similar structure for different groups and scales. It has what can be called a "fractal" aspect. The underlying effect is no artefact at all and probably does show the existence of a latent factor.

Of course, all the activities do not equally contribute to define this latent factor of "volume of activity". Visiting an art exhibition, a museum, or a historical monument, reading books, going out to the cinema are the variables that contribute more than others. These activities indisputably present a "cultural" connotation – connotations that can consequently be found in the first dimension of the universe of practices. However, we cannot easily isolate "the" cultural or sports practices that would define the axis. The loadings regularly decrease without observing a well-defined threshold. It is clearly not only the variables most correlated to the first factor that define it, but also their totality or their near-totality. In fact, the

44 variables enable one to generate an excellent Likert scale by simple summation with corresponding Cronbach's alphas (which assess internal reliability of a scale) in excess of 0.8.

Only three activities escape the rule of cumulativity and are negatively correlated to this "volume" dimension: fishing, hunting, and most of all, TV viewing. TV viewing is clearly in the opposite logic, that of reciprocal exclusion: the more TV one watches, the less likely one is to do other activities, while the more activities one does, the less TV one watches. Nevertheless we should not deduce that there is a total incompatibility between TV viewing and other leisure since it is rare to meet people who do not watch TV at all, even when they practice many activities.

4.3.2 Groups of People Having Similar Activities

Here we present one set of three clusters (groups of persons) which are the set obtained by the K-Means cluster analysis method when applied to the individuals described through the synthetic indicators which constitute the first three dimensions of the PCA mentioned earlier.

As we stated earlier, several aspects make applications of cluster analysis difficult. It is worth reminding the reader that the techniques and conventions used by these clustering methods which group together individuals who have similar activities actually differ from one method to another. In Appendix 4.2, elements on the robustness of the various solutions obtained can be found. We may deduce that there is indeed a certain form of data structuring and that the three-group solution we will present is an acceptable summary of it, but there is obviously some vagueness shed on the true borders between styles, and particularly with regard to the one that will be numbered Group 2 in what follows. Moreover, it would be quite simplistic to consider that all the people classified in one style are characterized by a set of strictly similar activities.

The three-group solution is presented in Fig. 4.1, in a "space of practices", the dimensions of which are the two first components of the overall component analysis of the set of the 44 activities described above. The ellipses are constructed so as to include respectively 50% and 90% of the persons belonging to each of the three styles. The three groups of persons will be numbered in the order of the average values taken by the vertical axis of the graph – that is the first component – by increasing "volume of activities". "Group 3" is for the highest value – the most "active".

Which activities do the people practice in the three groups? It appears that if Groups 1 and 3 are mainly defined by their position in reference to the vertical axis, Group 2 gather individuals whose values for this first component are medium but whose values for the second component are high. More precisely, whatever the activity considered, the practice on average is weaker in Group 1 than in Group 2 and in Group 3, TV viewing aside. The practice levels are generally higher in Group 3 than in Group 2 but there are significant exceptions: the indicators are

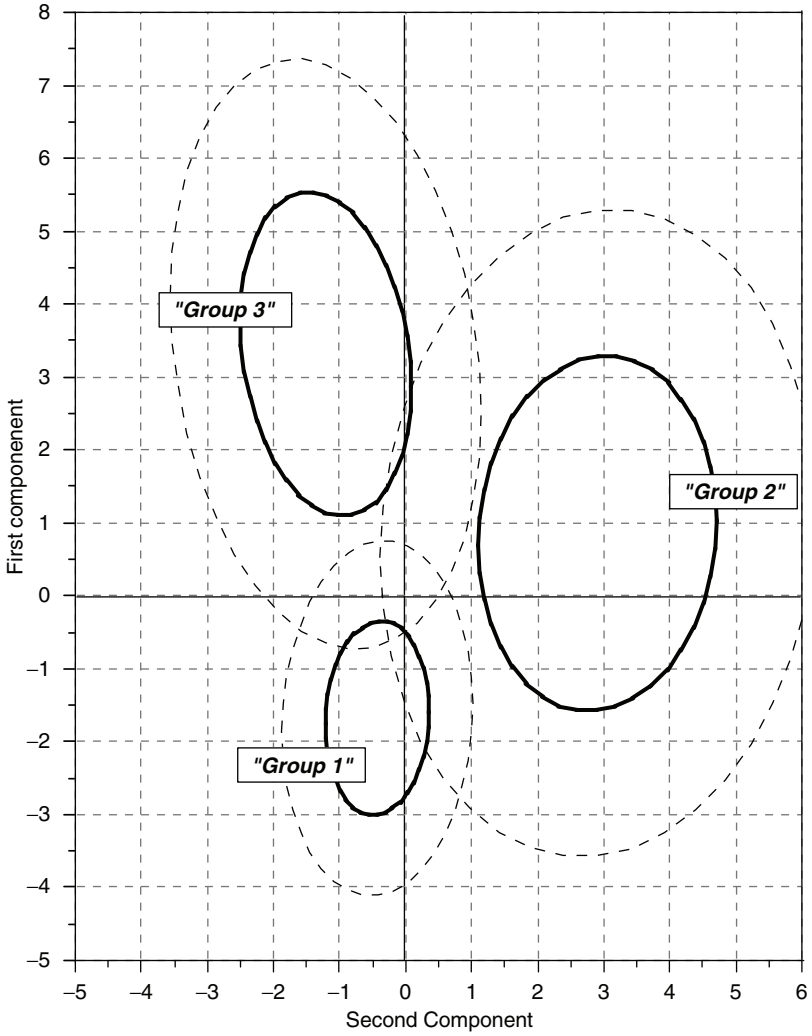

Fig. 4.1 The three lifestyles in a space of practices (employed or previously employed persons)

higher in Group 2 for almost all the sports activities, especially for the "passive" sport activities such as reading daily sports newspapers, and for music listening, going out to the cinema and reading regional daily newspapers. It would be tempting to describe Group 1 as "homebodies" or "TV-addicts", Group 2 as "athletic" and Group 3 as "cultured".

However, it would seem restrictive to associate the clusters that we have just created too closely to the exclusive practice – or the absence of practice – of certain activities. For instance, the scale that we can create by adding up the three or four

first activities that appear through recursive partitioning analyses as the ones that most predict the membership to Group 1 (theatre, museum, artistic exhibition) moderately predicts the belonging to that group: only extreme values of that scale would guarantee that the individual does – or not – belong to that group, and only a few members of the group are plotted this way. The results are exactly the same whatever the group considered.

So, it is not straightforward to define a group and to name it through a limited number of activities that are supposed to be characteristic of its members and them only. Despite many attempts, we did not manage to determine groups of activities the practice of which would guarantee that persons practicing them belong to another such group. Obviously this does not mean that it is impossible to do so, only that there is little chance of success. In this respect, the groups moderately refer to some of the usual connotations of the word "lifestyle". Though attractive in their simplicity, these connotations do not correspond very well to the real diversity of individual activities.

4.4 Back to the Homology Thesis

The three indicators we presented above – income, education and occupational status – are highly correlated. The first component of a *PCA* on these three indicators explains 66% of the variance and is correlated positively and almost equally to each indicator. The second component (23%) contrasts the income indicator with the two others. The occupational status indicator and the educational one alone define the third component, which contrasts them both with each other.

We can clearly read these results as pointing to Bourdieu's social space. The education scale as well as the occupational scale could be regarded as proxies of the dimension of "cultural capital" as opposed to the economic capital. It is thus possible to create an index of "global capital" by adding up the three indicators, as well as an index of composition of this global capital calculated as the half-sum of the indicators of education level and occupational status minus the indicator of monetary resources: these two indexes are respectively correlated at 0.98 to the first two components of the PCA. The resulting social space is given in Fig. 4.2.

In fact, the distribution of the population within this social space is quite independent from the precise way we operationalise the two dimensions. Its characteristics, on which we will comment briefly, appear structural. First, the distribution of the "global capital" is quite asymmetrical with a mode for lower values. Secondly, as opposed to the findings reported in *Distinction*, what differentiates the bottom from the top of the overall hierarchy is not the fact that higher categories vary more than others with the composition of their capital. The degree of the diversification – according to the indicator that has been built – seems more limited in these higher categories. These results seem in contradiction with what Bourdieu discussed in *Distinction*.

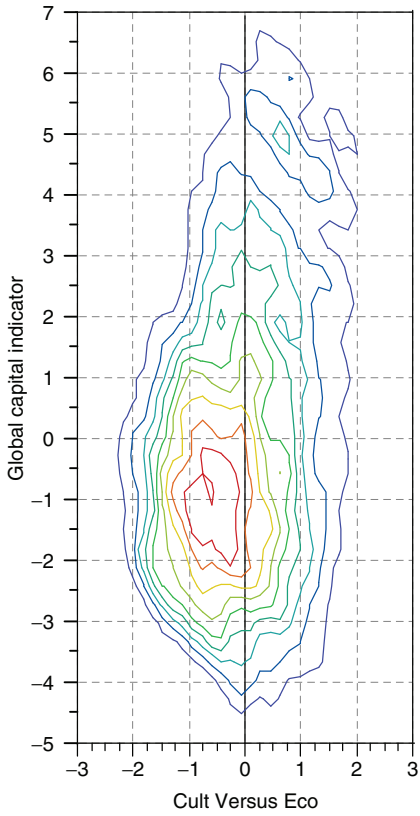

Fig. 4.2 Density of the French population in a Bourdieusian social space (employed or previously employed persons)

4.4.1 Overlapping Lifestyles in a Bourdieusian Social Space

Can we establish a close relationship between people's social position and the kind of activities they practice? In Fig. 4.3, there is an attempt to map the lifestyles in social space. The ellipses in continuous line each gather again 50% of the population characterised by any of the three styles, the ellipses in dotted line gather 90% of the same groups.

The ellipses in question intersect very clearly even if we limit ourselves to the ones at 50% that – presumably – isolate the "hard cores" of each lifestyle. Thus a considerable part of the persons sorted in the two cores of the two most extreme styles de facto hold similar positions in the social space.[3] From this angle at least, the homology appears quite modest. Another gap also appears with what could have been anticipated in view of Bourdieu's suggestions. The lifestyles that we defined

[3] This corresponds to around 20% of the respondents in each of the two groups.

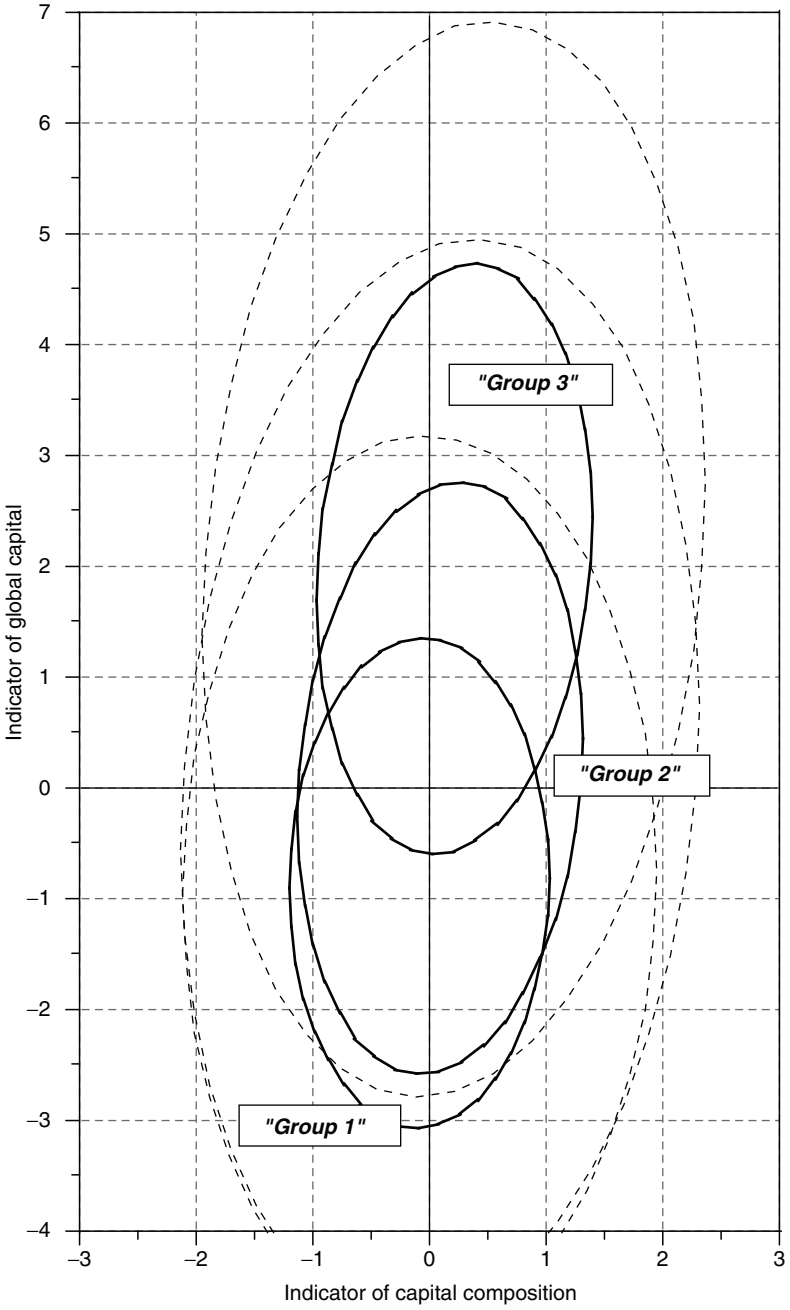

Fig. 4.3 The three lifestyles in a Bourdieusian social space (employed or previously employed persons)

mirror the dimension of the "global capital" but not much that of the "composition of the capital", which does not seem to intervene. With the operationalizations chosen – assuming that they are satisfactory – the second dimension of social space in the Bourdieusian sense is not effective to differentiate the lifestyles even if the first dimension, the one of global capital, is very clearly effective.

In fact, the differences between the three lifestyles that appear after examining the variations in the probabilities of belonging to different lifestyles according to the social and demographic characteristics (Coulangeon & Lemel, 2007b) explain the result. Belonging to the first or third lifestyle first reflects the hierarchical position of the individual considered – whatever the indicator. The same does not go for the second cluster – that of "athletic people" in the broad sense. Belonging to that cluster very much depends on gender: there are no women in that cluster. All men do not belong to it but many – over a quarter – do.

4.5 Discussion and Conclusions

We shall remind the reader that the data examined here apply to the 2000s and that the analysis cannot be considered as directly testing *Distinction* that dates back to the 1960s and 1970s. What can be examined is – at best – the topicality of the model proposed by Bourdieu in *Distinction* for contemporary France. All in all, the results obviously do not coincide with a systematic interpretation of the modelisation he suggested.

4.5.1 Relevance of the Bourdieusian Model in France in the 1990s

The "structural homology" component of the Bourdieusian model has to be qualified if we want to apply it to contemporary France. Loose correspondences can be established between social positions and lifestyles, but they are certainly not one to one. The correspondences between behaviours and social and cultural characteristics are far less definite than suggested by the idea of "structural homology", when used in the strict sense.

Furthermore, another element in the model is not to be found in the results: the composition of the "capital" is not as relevant as suggested in *Distinction* and does not allow a differentiation of the lifestyles. It is worth noting that this "composition of the capital" actually refers to a form of status inconsistency and that several attempts to evaluate the consequences have hardly been successful (Zhang, 2008). It is thus not so surprising that we struggle to identify this dimension of social space as having significant effects in the present study. We may as well wonder if its effects have not been overestimated for France in the 1960s. Yet, the dimension of global

capital does clearly work even if the differences in practices cannot be brought back to social and cultural hierarchies only, for gender (as well as age) matters too.

Besides, the main criterion to differentiate practices stems from logic of accumulation. This accumulation logic is obviously more in line with the "omnivore/univore" hypothesis that suggests opposing persons practicing many different activities with the ones who devote themselves to a limited number of practices than with a highbrow/lowbrow opposition. However, one should not conclude that the principle of exclusion/distinction, the principle that is at the heart of the approach in *Distinction*, is now obsolete. The emphasis placed on the role played by culture in social relations is not invalidated by the growing omnivorousness of the cultural consumption of high status groups. Insofar as omnivorousness is positively correlated with status and education, it could appear to constitute a new norm of cultural legitimacy.

As for the idea of a total individualization of lifestyles, it does not appear highly compatible with the importance of the differences that we observed in the individuals' behaviours according to their social or demographic characteristics – even though no strict structural homology can be found.

Of course, the previous comments imply that our statistical treatments are acceptable. Here, three comments could be made. First, we must accept a microsociological perspective that could be criticized when applied to Bourdieu's works. Second, dealing separately with a space of practices and a space of social positions is in accordance with the idea of structural homology in the strict sense, but such an approach is less in line with a more dialectic interpretation of the links between practices and positions. Thirdly, we may wonder about the relevance of methods that impose a classification of *all* individuals into a limited number of styles: all are supposed to have a "style" that at least defines them. Proceeding this way implies some considerable risks of over-interpretation.

4.5.2 Can We Make a Generalization Beyond the Scope of Culture, Strictly Speaking?

When we compare the list of activities of the *EPCV* survey with the ones of the series of *Time Use* surveys, we see that some activities people could have are not at all present in the scope studied here: the activities directly linked to work, to children, to human physiology (medical care primarily) and to housekeeping and household production. Our data probably obscure the possibility for many situations or social positions to appear as generating a specific lifestyle.

Would we obtain utterly different results if all these activities were available? Without data, we can only make speculations. From the results obtained through the *Time Use* surveys (see, for instance, Chenu & Herpin, 2002), we can imagine that the same logic of accumulation and consumption would probably surface. It is likely that by introducing the activities of household production, gender differences would be even mor e pronounced.

Appendix 4.1 The indicators of practice

Activity	Reported categories of participation
TV viewing	Per week, (1) no watching, (2) less than 25 h, (3) 26–55, (4) more than 55 h
Radio listening	Per week, (1) less than 10 h, (2) 11–25, (3) 26–50, (4) more than 50 h
Number of comics	In the year, (1) no comic strip read, (2) 1–9, (3) ten and more
Numbers of books	In the year, (1) no book read, (2) 1–9, (3) ten and more
Library attendance	In the year, (0) none, (1) less than once a month, (2) once to twice a month, (3) more than twice a month
Regional daily newspaper reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
National daily newspaper reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Other daily reading (eco fin, foreign)	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Other magazine reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly note: in view of the way the question is expressed, it covers news like in *L'Express*, *Obs*, etc.
TV magazine reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Scientific magazine reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Cultural magazine reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Music listening	Per year, (0) never, (1) less than once a day, (2) once a day, (3) more than once a day
Cinema	Per year, (0) none, (1) less than once a month, (2) once to twice a month, (3) more than twice a month
Theatre	Per year, (0) none, (1) 1 outing, (2) 2 outings, (3) 3 outings or more
Historic or sound-and-light show	Per year, (0) none, (1) 1 outing, (2) 2 outings or more
Dancing show	Per year, (0) none, (1) one outing, (2) 2 outings, (3) 3 outings or more
Circus	Per year, (0) none, (1) 1 outing, (2) 2 outings or more
Music hall, variety and comedy shows	Per year, (0) none, (1) 1 outing, (2) 2 outings or more
Opera, operetta	Per year, (0) none, (1) 1 outing, (2) 2 outings or more
Concert	Per year, (0) none, (1) 1 outing, (2) 2 outings, (3) 3 outings or more
Visit of a historical monument	Per year, (0) none, (1) 1 or 2, (2) 3–6, (3) more than 6 visits
Visit of an art exhibition	Per year, (0) none, (1) 1, (2) 2 or 3, (3) 4 visits or more
Visit of another type of exhibition	Per year, (0) none, (1) 1, (2) 2 visits or more
Visit of a museum	Per year, (0) none, (1) 1, (2) 2 or 3, (3) 3 visits or more
Artistic hobbies	Per year, (0) none, (1) 1, (2) more than 1
Daily sports newspaper reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Sports magazine reading	(0) Never, (1) seldom, (2) from time to time, (3) regularly
Sports event	Per year, 0 or 1
Jogging	Number of standardised days per year when the activity has been observed
Swimming	Number of standardised days per year when the activity has been observed
Cycling	Number of standardised days per year when the activity has been observed
Bodybuilding	Number of standardised days per year when the activity has been observed
Snow sports	Number of standardised days per year when the activity has been observed
"Hiking"	Number of standardised days per year when the activity has been observed

(continued)

Appendix 4.1 (continued)

Activity	Reported categories of participation
Mountaineering, potholing	Number of standardised days per year when the activity has been observed
Ping-pong, badminton, squash	Number of standardised days per year when the activity has been observed
Bowl games, billiards	Number of standardised days per year when the activity has been observed
Fishing	Number of standardised days per year when the activity has been observed
Hunting	Number of standardised days per year when the activity has been observed
"Team" sports	Standardised sum on i, i = foot, rugby, hand-ball, number of days in the year when the i activity has been observed
Golf, horse-riding, tennis, sailing	Standardised sum on i, i = golf, horse-riding, tennis, sailing, number of days in the year when the i activity has been observed
Dancing, gymnastics, yoga	Standardised sum on i, i = dancing, gym-yoga, number of days in the year when the i activity has been observed
Other sports	Standardised sum on i, I among the other sports, number of days in the year when the i activity has been observed

"Standardised" means that the variation range of the indicator was conventionally brought up from 0 to 4 by the rule of three.

Appendix 4.2 The robustness of the clustering analysis

We compared the results of usual hierarchical linkage and Ward methods as well as the K-means method. We also compared the results obtained according to whether the individuals are described through the set of 44 indicators or through the first three components of the PCAs, the latter approach offering the advantage of diminishing the weight of the "outliers".

The K-Means method is not hierarchical and requires first specifying the number of groups to be created. *Distinction* provides some suggestions; in its third part, for example, three different chapters examine people who are supposed to share a common position and suggests retaining three to six clusters. The K-means method was thus applied by looking up the solutions with respectively 6, 5, 4 and 3 groups. In fact, these more or less detailed solutions are stacked into each other, which is in this case is a result and not a starting point as would be the case had we implemented hierarchical partitioning. It is often argued that a possible problem with the K-means method is that the results are sensitive to the number of clusters. In the present case, however, this is absolutely not the case and the results seem not to depend on the chosen number.

Regarding the linkage methods, experiences show that the hierarchical tree has to be cut far below six nodes in order to obtain meaningful groupings. For reasons that may be linked to the fact that the Ward method aims at minimizing the inter-cluster variances at any moment, we do not have the same problem. Cutting at three nodes provides three clusters of reasonable size. These cluster very much look like those obtained by the K-Means method.

In the text, we keep as a working basis the solutions obtained by the K-means method and the synthetic indicators. This choice can be justified by the internal coherence of the various solutions we can obtain by changing the number of groups considered and by the fact that the hierarchical Ward method – the only hierarchical method that gives results which do not appear too sensitive to particular cases – gives very similar results. However, it is clear that the methods do not all give the same results. Because very small groups gathering people who practice such and such "sports" activity are very often created through the linkage methods, the inner heterogeneousness in the clusters of the "athletic" series seems particularly stronger than in the others.

Chapter 5
Transmutations of Capitals in Canada: A 'Social Space' Approach

Gerry Veenstra

Abstract Transmutations of capitals refer to processes whereby one form of capital gets converted into another. The French sociologist Pierre Bourdieu extensively theorized capital conversions in a book chapter entitled "The forms of capital" and empirically investigated them in his magnum opus, Distinction: A Social Critique of the Judgment of Taste. Bourdieu's perspective on conversions between capitals has since proven to be extremely influential in related research around the globe. Bourdieu explicitly adopted a relational, field-theoretic approach to causality rather than a linear one. Statistical techniques such as regression modeling that complement a linear-causal perspective, however, do not complement a relational worldview, implying that much of the research inspired by Bourdieu is not truly consistent with his theoretical approach. By applying relational statistical techniques to survey data from Canada I attempt here to produce a rare analysis of capital conversions that is analytically faithful to Bourdieu's relational perspective, eschewing linear modeling and consideration of independent and dependent variables and linear relations of causality between them.

5.1 Introduction

Transmutations of capitals refer to processes whereby one form of capital gets converted into another. The French sociologist Pierre Bourdieu extensively theorized capital conversions in a book chapter entitled "The forms of capital" (Bourdieu, 1986) and empirically investigated them in his magnum opus, *Distinction: A Social Critique of the Judgment of Taste* (Bourdieu, 1984a). Bourdieu's perspective on conversions between capitals has since proven extremely influential in related research around the globe. The following examples typify much of the sociological research informed by his ideas.

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K. Robson and C. Sanders (eds.), *Quantifying Theory: Pierre Bourdieu*,

An article recently published in the *Sociology of Sport Journal* presents results from a statistical investigation of the association between participation in high school varsity sports and adult income in the US (Stempel, 2006). The author used data from an American national telephone survey of adults aged 22–45 years and OLS regression modeling techniques to describe the effect of participation in varsity sports on adult income while controlling for educational attainment, age, race, employment status and family situation. He found that participation in varsity sports during high school had a significant effect on adult income, especially for men. (After controlling for the other variables, men who had played varsity sports reported incomes that were US $3,798 higher on average than the incomes of men who were not varsity athletes.) Stempel sought to explain the varsity sports–adult income association by introducing variables assessing adult sporting practices – participation in the previous month in running/jogging, aerobics, weightlifting, tennis, walking for exercise, cycling, bowling, swimming, ball-games and golf – to the models, finding that swimming, ball-games and tennis mediated the varsity sports–adult income association for women and that golf and aerobics mediated the association for men. In short, Stempel found that certain kinds of sporting practices appear to be a kind of resource – a *cultural capital* – that facilitates the attainment of another valuable asset, namely, *economic capital*.

In an article published in *Demography*, Perreira and colleagues explore one aspect of assimilation trajectories of immigrants to the US by investigating predictors of dropping out of high school among immigrants (Perreira, Harris, & Lee, 2006). They used data from a study of adolescents in grades 7 through 12 collected by in-home questionnaires in 1994–1995 and 2001–2002, accompanied by contextual information about the schools attended by the students and the neighborhoods in which they live, to investigate this assimilation issue. A series of logit models described the degree to which the probability of dropping out was a function of the respondent's race/ethnicity, immigrant generation, facility with English, attachment to school and educational aspirations, the parent's educational attainment, family structure, the percentage of students in the respondent's school who participated in school activities, and the degree to which the neighborhood of residence was socioeconomically disadvantaged and racially segregated. Specially focusing on Asian and Hispanic immigrants, they found that Hispanic youth in the third generation and beyond who lacked English skills were at far greater risk of dropping out than those in the first generation, that first-generation Hispanic and Asian youth with strong attachments to school and high college aspirations were less likely to drop out than their counterparts, and that second-generation Asian students benefited most from attending schools with high levels of school activity participation. In short, Perreira et al. found that certain cultural skills and social environments – what we might call *cultural* and *social capitals* – facilitate the acquisition of *educational capital*.

Both of these studies describe and explain conversions between capitals by applying linear statistical modeling techniques to survey data and utilizing an analytical strategy comprised of initially controlling for variables that might confound the primary relationship(s) of interest and then introducing other variables in stages so as to explicate the causal nature of the primary relationship(s). This approach to investigating capital conversions is consonant with traditional linear-causal thinking within the social

sciences wherein causality is thought to occur when a change in state in one variable produced by external manipulation impels a change in another (Martin, 2003). The sociological research literature on capital conversions is replete with quantitative studies that similarly utilize linear-causal statistical techniques and analytical strategies.

But Bourdieu explicitly adopted a relational, field-theoretic approach to causality rather than a linear one. From a relational perspective, changes in state involve an interaction between the field and the existing states of the elements within it; all elements in fields are related and interdependent, and no one element 'causes' change in another (Martin, 2003). Statistical techniques such as regression modeling that suit a linear-causal perspective do not complement a relational worldview, implying that much of the research inspired by Bourdieu is not truly consistent with his theoretical approach. By applying relational statistical techniques to survey data from Canada I attempt here to produce a rare analysis of capital conversions that is analytically faithful to Bourdieu's relational perspective, eschewing linear modeling and consideration of independent and dependent variables and linear relations of causality between them. Before describing the results of my empirical investigation, however, I set the stage theoretically by briefly outlining Bourdieu's understanding of capital in general and how conversions between capitals occur in the fields and social spaces that give them their meaning.

5.2 Capitals, Fields and Conversions

For Bourdieu, the abstract notion of *capital* can be extended to "all the goods, material and symbolic, without distinction, that present themselves as rare and worthy of being sought after in a particular social formation" (Harker, Mahar, & Wilkes, 1990: 1). The two most important forms of capital in modern societies, according to Bourdieu, are economic capital and cultural capital (Bourdieu, 1984a, 1998). *Economic capital* is immediately and directly convertible into money, and may be institutionalized in the form of property rights. Free time and flexible schedules are direct transformations or transmutations of this form of capital (Bourdieu, 1978).

Cultural capital, like economic capital, can come in several different forms. Educational credentials represent the institutionalized form of cultural capital, a kind of educational capital. With a prestigious educational credential comes a "certificate of cultural competence which confers on its holder a conventional, constant, legally guaranteed value with respect to culture" (Bourdieu, 1986: 248). Cultural tastes and inclinations, what Bourdieu called embodied cultural capital, are lasting dispositions of mind and body whereas objectified cultural capital equates to the possession of valued cultural goods. These dimensions of cultural capital are often inculcated in families via processes of socialization or inheritance, and all can serve as resources for the attainment of other forms of capital.

A third important capital for Bourdieu is *social capital*. This form of capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu, 1986: 248). It essentially refers to resources

embedded in social relationships of various kinds that can be mobilized in certain situations to achieve certain ends. Although Bourdieu did not incorporate social capital into his empirical investigation of capital conversions in France, likely in part because of a paucity of suitable measures in his survey data, he argued that it too can serve as a resource for the attainment of other forms of capital.

Capitals attain their meaning not intrinsically but rather in the context of specified *fields*. A field is "a set of objective, historical relations between positions anchored in certain forms of power (or capital)" (Bourdieu & Wacquant, 1992: 16). It "is a social arena within which struggles or manoeuvres take place over specific resources or stakes and access to them" (Jenkins, 2002: 84). Of the many fields that permeate and constitute modern societies, e.g., the artistic, political, legal and academic fields, a society's *social space* is the overarching field in society that encompasses and subsumes all of the others. Its character, qualities and dimensions are essentially determined by relations among and conversions between the most important capitals in modern societies, namely, economic capital and cultural capital (Bourdieu, 1984a, 1989a, 1998).

Bourdieu applied a statistical technique called correspondence analysis to survey data from 1960s France to create a visual representation of a French social space anchored in possession of economic capital and cultural capital (Bourdieu, 1984a, 1998). Correspondence analysis assesses all interrelationships within a set of categorical variables simultaneously, mapping in visual form the two or three primary dimensions that summarize some of the immense complexity of the relationships (Clausen, 1998). Proximity between variable categories in a visual mapping therefore represents their proximity in the dataset as a whole as summarized by the primary dimensions constructed from it: "Spatial distances on paper are equivalent to social distances" (Bourdieu, 1998: 6). Bourdieu crafted his representation of a three-dimensional French social space from the visual mappings produced by applications of correspondence analysis to several different survey datasets.

Bourdieu interpreted the primary (vertical) dimension of French social space to represent total possession of economic capital and cultural capital summed together and the second (horizontal) dimension to represent the relative composition of these two forms of capital. Importantly, this overarching field of French society manifested *potential* social classes according to Bourdieu. The embryonic dominant class was located in the upper portion of social space and possessed large sums of both economic and cultural capital whereas the working class was located in the lower portion of social space and possessed little capital of either form. Dominated and dominating segments of these classes were dictated by their relative composition of economic and cultural capital, with relatively greater wealth corresponding with advantage in a class, especially in the upper-class part of social space.

Bourdieu's relational conceptualization and empirical depiction of social space informs the nature of conversions between capitals in French society, partly because conversions facilitate movements within social space, e.g., movement from lower space to upper space by increasing one's total sum of capital or from a dominated position to a dominating one within a class by converting cultural capital into economic capital. Bourdieu was concerned to understand the laws and processes by which certain forms of capital undergo transmutation into other forms.

> A general science of the economy of practices, capable of re-appropriating the totality of the practices which, although objectively economic, are not and cannot be socially recognized as economic, and which can be performed only at the cost of a whole labor of dissimulation or, more precisely, *euphemization*, must endeavor to grasp capital and profit in all their forms and to establish the laws whereby the different types of capital (or power, which amounts to the same thing) change into one another (Bourdieu, 1986: 242–243).

Processes of conversions between these capitals can be quite subtle. For instance, while families can directly transfer economic capital across generations by inheritance, a decidedly unsubtle process, they can also use their economic capital to facilitate indirect transfer of economic capital across generations via attainment of valued educational credentials by their children, the latter strategy more risky but more disguised than the former. Equally subtly, economic capital can be converted into stores of social capital which can eventually manifest themselves in future profits of some kind or other.

> It has been seen, for example, that the transformation of economic capital into social capital presupposes a specific labor, i.e., an apparently gratuitous expenditure of time, attention, care, concern, which, as is seen in the endeavor to personalize a gift, has the effect of transfiguring the purely monetary import of the exchange and, by the same token, the very meaning of the exchange. From a narrowly economic standpoint, this effort is bound to be seen as pure wastage, but in the terms of the logic of social exchanges, it is a solid investment, the profits of which will appear, in the long run, in monetary or other form (Bourdieu, 1986: 253).

While conversions between economic, cultural and social capital can likely flow from any one capital to another under appropriate circumstances, Bourdieu believed that economic capital is the most important of the forms of capital and therefore central to nearly every transmutation of capitals.

> [I]t has to be posited simultaneously that economic capital is at the root of all the other types of capital and that these transformed, disguised forms of economic capital, never entirely reducible to that definition, produce their most specific effects only to the extent that they conceal (not least from their possessors) the fact that economic capital is at their root, in other words – but only in the last analysis – at the root of their effects (Bourdieu, 1986: 252).

This means that a Bourdieusian investigation of capital conversions should include especially close attention to the centrally important economic capital, either as an ultimate outcome of a process of reconversion or as one of the primary capitals that constitutes it. In addition, an empirically-informed Bourdieusian investigation of capital conversions should attempt to craft visual representations of relationally-defined fields or social spaces, seeking to explicate potential conversions between those capitals which are located in close proximity on the page and thus in close proximity in the field or space. I pursue this approach here using survey data from Canada.

5.3 Methods

The data come from the 2003 Canadian General Social Survey on Social Engagement. Computer-assisted telephone interviewing and random-digit dialing methods were used by Statistics Canada to collect the survey data. A total of 24,951 usable responses produced a final response rate of 78%. The sample of 13,908

respondents who were employed or looking for work and were aged 15–64 at the time of the survey was utilized here.

Table 5.1 describes measures of economic capital, cultural capital and social capital. Economic capital was assessed by household income and home ownership. Cultural capital was assessed by highest personal educational attainment and

Table 5.1 Measures of capital

	Categories	Distribution (%)
Economic capital		
Home ownership	Own home	10,283 (74.3)
Household income	Less than $20,000	529 (4.6)
	$20,000–39,999	1,988 (17.2)
	$40,000–59,999	2,606 (22.5)
	$60,000–79,999	2,216 (19.1)
	$80,000–99,999	1,646 (14.2)
	More than $100,000	2,593 (22.4)
Cultural capital		
Highest level of education obtained by respondent	Graduate school	914 (6.6)
	Bachelor's degree	2,659 (19.2)
	Community college diploma	2,093 (15.1)
	Trade/technical diploma	2,054 (14.9)
	High school	4,276 (30.9)
	Less than high school	1,828 (13.2)
Highest parental educational attainment is highest of education obtained by the respondent's father and by the respondent's mother	Parent graduate school	714 (5.8)
	Parent bachelor's degree	1,697 (13.8)
	Parent community college diploma	894 (7.3)
	Parent trade/technical diploma	852 (7.0)
	Parent high school	3,773 (30.8)
	Parent less than high school	4,326 (35.3)
Social capital		
In the last month, how often did you see relatives (outside of people you live with)?	Visit relatives often	5,127 (36.9)
	Visit relatives sometimes	6,279 (45.2)
	Seldom visit relatives	2,489 (17.9)
How many friends do you have, that is, people who are not your relatives but who you feel at ease with, can talk to about what is on your mind, or call on for help?	No close friends	696 (5.0)
	1 or 2 close friends	3,390 (24.5)
	3–5 close friends	5,786 (41.8)
	6 or more close friends	3,986 (28.8)
How many other friends do you have who are not relatives or close friends?	No acq-friends	561 (4.1)
	1 or 2 acq-friends	448 (3.3)
	3–5 acq-friends	1,610 (11.8)
	6 or more acq-friends	11,035 (80.8)
In the past 12 months, were you a member or participant in a union or professional organization?	Member of union/professional organization	4,765 (34.3)
In the past 12 months, were you a member of participant in a political party or group?	Member of political organization	645 (4.6)

(continued)

Table 5.1 (continued)

	Categories	Distribution (%)
In the past 12 months, were you a member or participant in a sports or recreation organization (such as a hockey league, health club, golf club)?	Member of sports/recreational organization	4,260 (30.7)
In the past 12 months, were you a member or participant in a cultural education or hobby organization (such as a theatre group, book club or bridge club)?	Member of cultural education/ hobby organization	2,353 (16.9)
In the past 12 months, were you a member or participant in a religious-affiliated group (such as a church youth group or choir)?	Member of religious organization	2,102 (15.1)
In the past 12 months, were you a member or participant in a school group, neighbourhood, civic or community association (such as PTA, alumni, block parents, neighbourhood watch)?	Member of community organization	2,079 (15.0)
In the past 12 months, were you a member or participant in a service club or fraternal organization (such as Kiwanis, Knights of Columbus, the Legion)?	Member of service club	967 (7.0)
Now I would like to ask you a few questions about your more immediate neighbourhood. Would you say that you know:	Know many neighbours Know a few neighbours Know no neighbours	5,592 (40.5) 7,112 (51.5) 1,113 (8.1)
Calculated from 'In the past month, have you done a favour for a neighbour?' and 'In the past month, have any of your neighbours done a favour for you?'	Favours among neighbours	6,931 (50.3)

highest parental educational attainment, the latter calculated from variables assessing the educational credentials of the respondent's mother and father. Social capital was assessed by a series of measures of participation in different kinds of clubs and associations in civil society, frequency of contacts with neighbors and relatives, and numbers of close friends and casual acquaintances.

The statistical analysis reflects relational rather than linear-causal thinking and therefore does not identify independent and dependent variables. Categorical principal components analysis (CATPCA) is an extension of correspondence analysis that can accommodate n-way contingency tables and ordinal variables arrayed along vectors. While the number of dimensions produced by these relational techniques can be large typically only the two or three dimensions that explain the most variability are readily interpretable. Visual mappings of these dimensions present

the variable categories spatially, with variable categories close on paper deemed to be close in the dataset. The contribution of specific variables to dimensions can be discerned via component loadings enabling the researcher to interpret the primary dimensions. Variables and/or variable categories can be designated 'active,' i.e., they will be used by the routine to compute the dimensions that produce the visual mappings, or 'supplementary,' i.e., they will be simply overlaid upon the visual mappings produced by the active variables and variable categories.

I applied the CATPCA routine in SPSS 13.0 to the 16 variables of Table 5.1, designating all of these variables as active, utilizing the variable principal normalization option to optimize the association between them and restricting the number of dimensions to two at the onset. In addition, measures of gender, first language (English, French or other), country of birth (Canada or other), ethnic/cultural identity, religious affiliation, age, marital status, number of children at home, province of residence, urban versus rural setting and occupational classification were included as supplementary variables. I designated the household income, visiting with relatives, numbers of close friends and acquaintances and familiarity with neighbors variables as ordinal and the other variables as nominal. The routine utilized 9,990 valid cases and 3,918 cases possessing one or more missing values; I imputed modes for these missing values.

5.4 Canadian Social Space

The resulting Dimensions 1 and 2 of my representation of Canadian social space are depicted visually in Fig. 5.1. The dimensions are continuous in nature and their intersection in the centre of the figure represents (0.0). The variable categories are located spatially according to their placement along these two dimensions. For instance, the 'graduate school' category for personal education is located at 0.91 on the vertical axis (Dimension 1) and −1.25 on the horizontal axis (Dimension 2), and 'no close friends' is located at −1.17 along Dimension 1 and 0.13 along Dimension 2.

The crucially important Dimension 1 is displayed vertically. Dimension 1 distinguishes between those people who participate in certain kinds of networks in civil society and those who do not, especially those who belong to community and cultural education/hobby organizations, located centrally at the very top of the space. It also clearly distinguishes degree of possession of another form of social capital, namely, numbers of close friends and acquaintances, with people socially unconnected in this way located near the bottom of the space. In addition, educational attainment, parental educational attainment and household income disperse themselves widely along Dimension 1, with higher amounts of these forms of capital located nearer the top of the space and lower amounts situated towards the bottom. The variance statistics in Table 5.2 indicate that educational attainment and household income are the most important predictors of placement along this dimension, followed in order of importance by participation in a cultural education and hobby organization, participation in a community organization, participation in a sports

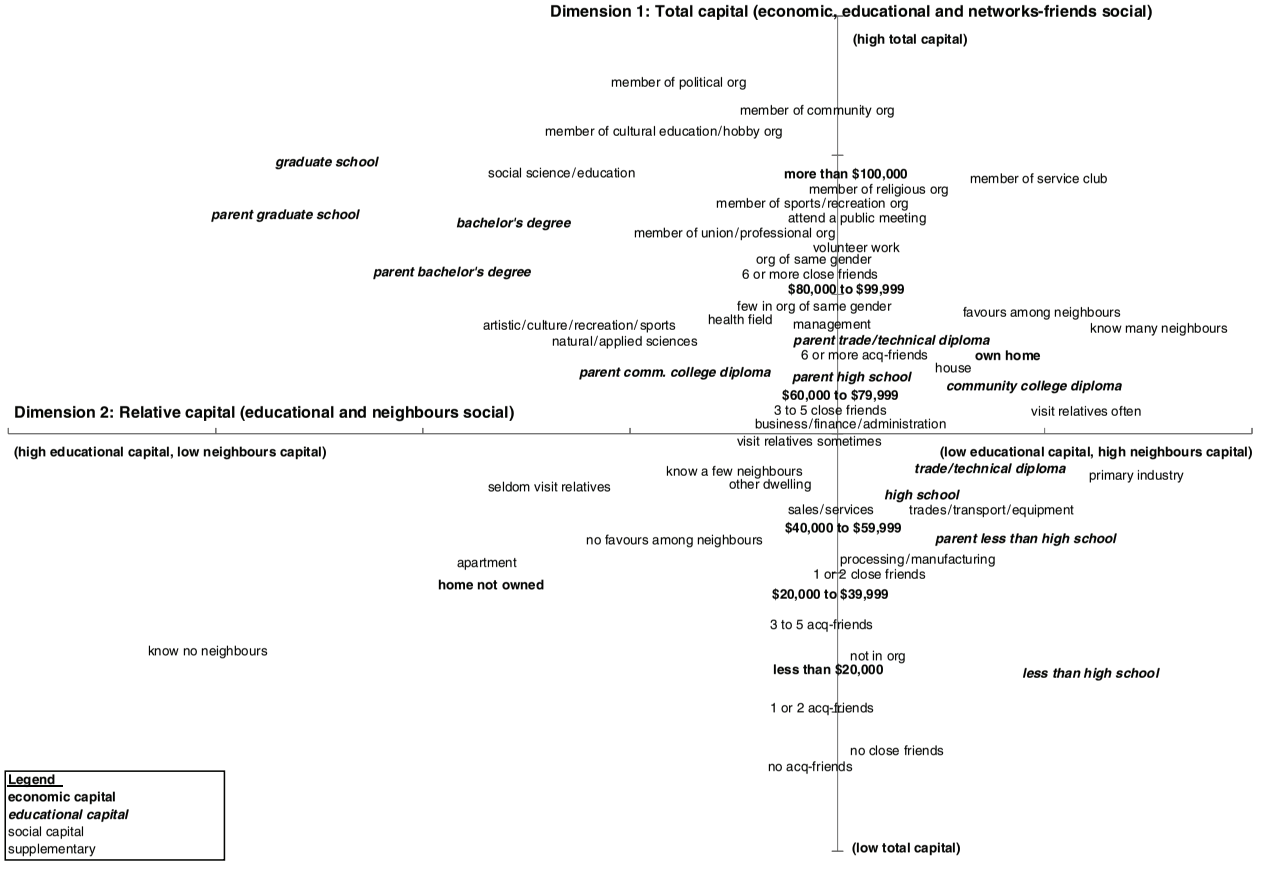

Fig. 5.1 Social space of employed/employable Canadians

Table 5.2 CATPCA: component loadings and variance accounted for by centroid coordinates

	Variance accounted for		Component loadings	
	D1	D2	D1	D2
Active variables				
Own dwelling	0.103	0.251	–0.321	0.501
household income	0.258	0.010	0.508	–0.010
Highest educational attainment	0.260	0.260	–	–
Highest parental educational attainment	0.132	0.261	–	–
Visit with relatives	0.014	0.158	–0.109	0.397
Number of close friends (not relatives)	0.196	0.003	0.443	0.050
Number of friends (not close friends)	0.175	0.001	0.418	–0.018
Participation in union or professional organization	0.218	0.021	–0.467	–0.144
Participation in political party/group	0.077	0.005	–0.277	–0.073
Participation in sports/recreational organization	0.234	0.001	–0.483	–0.030
Participation in cultural education/hobby	0.238	0.026	–0.488	–0.160
Participation in a religious affiliated group	0.105	0.001	–0.324	0.035
Participation in a school group, neighbourhood, civic or community association	0.236	0.000	–0.485	–0.016
Participation in a service club or fraternal organization	0.047	0.016	–0.218	0.126
Familiarity with neighbours	0.105	0.404	–0.324	0.635
Favours among neighbours	0.144	0.175	–0.380	0.418

and recreation organization, belonging to a union or professional organization, and number of close friends. I interpret Dimension 1 to represent the sum total of capitals, whereby position along this dimension is primarily defined by the additive sum of economic capital, cultural capital and 'networks-friends' social capital. Employed or employable Canadians who possess one of these forms of capital are likely to possess the others as well, and a substantial store of these capitals in the aggregate places a person high on this dimension.

Dimension 2 also explains a sizeable proportion of the total variance. This dimension is best explained by familiarity with neighbors, parental and personal educational attainment, home ownership, engaging in favors with neighbors and visiting with relatives (Table 5.2). These are primarily forms of cultural capital and social capital: the forms of economic capital and social capital that delimit Dimension 1 do not delimit Dimension 2. Dimension 2 does not represent the sum total of these particular forms of capital, however. Rather, moving leftwards along Dimension 2 corresponds with a *greater* store of cultural capital and a *lesser* store of social capital. Dimension 2 therefore represents the relative composition of cultural capital and 'neighbors' social capital whereby survey respondents with higher educational credentials are less likely to own their homes and to manifest close relationships with their neighbors and relatives. It seems that the acquisition of some forms of capital can come at the expense of acquiring others.

The lower part of this Canadian social space is characterized throughout by a lack of capital: people located here are typically not wealthy, tend to have few

educational credentials, seldom know their neighbors and tend to have few friends. Employment in the processing, manufacturing, sales, services, trades, transport and equipment industries inheres in this grouping.

The upper portion of social space might be called the Canadian *field of power*. Members of this space are typically wealthy, highly educated and integrated into civil society via participation in voluntary associations and attendance at public meetings. They tend to be employed in the social science, education, artistic, cultural, recreation, sports, health, natural science, applied science and management industries. Some are professionals (especially in the sciences, arts and culture, business and finance, and health sectors) and many belong to the ranks of university professors, judges, lawyers, psychologists, social workers, ministers of religion, policy and program officers, and nurses. Senior management occupations are also located here. But while this part of social space is characterized throughout by a large amount of aggregate capital, distinct sub-sections that reflect relative compositions of cultural capital and networks-friends and neighbors social capitals can be identified. Members of the upper-left quadrant tend to be highly educated but not as integrated into civil society and neighborhood networks as are others in the upper class part of this social space, whereas members of the upper-right quadrant are highly integrated into networks but less educated than their counterparts to the left.

Lastly, gender, first language, country of birth, ethnic/cultural identity, religious affiliation, age, marital status, number of children at home, province of residence and urban setting are not meaningfully distributed within this depiction of Canadian social space. We know this because the variance statistics for these variables are all close to zero (results not shown).

5.5 Capital Conversions in Canada

Investigation of proximity of capitals in this Canadian social space reveals four capital conversions of special interest. The first conversion pertains to key dimensions of cultural capital and is relatively straightforward: well-educated parents appear able to facilitate the attainment of educational credentials by their children. The 'less than high school,' 'bachelor's degree' and 'graduate school' categories for personal educational attainment are very close to their counterparts for parental attainment in the social space. Considered relationally and thereby simultaneously considering possession of other forms of capital, educational status traverses generations. Bourdieu too discussed this form of capital conversion within families:

> [C]ultural capital, whose diffuse, continuous transmission within the family escapes observation and control (so that the educational system seems to award its honors solely to natural qualities) and which is increasingly tending to attain full efficacy, at least on the labor market, only when validated by the educational system, i.e., converted into a capital of qualifications, is subject to a more disguised but more risky transmission than economic capital (Bourdieu, 1986: 254).

Although the 'disguised' transmission of capital via the education of one's children is risky, it appears to have been a successful strategy on the part of university-educated Canadians in earlier generations.

The second capital conversion of interest, also relatively straightforward, follows from the first: personal educational credentials enable the acquisition of economic capital. As one might expect, 'less than high school' corresponds with the lowest incomes in Fig. 5.1. More interestingly, while a bachelor's degree apparently facilitates a high household income, by virtue of being located in the far left of the field of power it appears that a graduate degree does not provide added economic benefit. Of course, graduate degrees like the M.B.A. undoubtedly *do* provide economic returns. They may require only a year or two of schooling, are sometimes facilitated financially by the employer, and often translate rather directly into promotions within companies and thence higher incomes. They also require financial outlay at the time of schooling which is surely a worthwhile investment in the long run:

> This product of the conversion of economic capital into cultural capital establishes the value, in terms of cultural capital, of the holder of a given qualification relative to other qualification holders and, by the same token, the monetary value for which it can be exchanged on the labor market (academic investment has no meaning unless a minimum degree of reversibility of the conversion it implies is objectively guaranteed) (Bourdieu, 1986: 248).

But while financial return in the labor market is a near surety for the holder of an M.B.A., the humanities Ph.D. recipient who has spent 8 years or so of graduate study on the sidelines of the labor market cannot be sure of getting an academic job upon graduation (and would not become wealthy as an academic anyway). It therefore appears that only so much and only certain kinds of educational investments correspond with accumulation of wealth, with others representing investments that may in fact mitigate wealth acquisition.

Social contexts like neighborhoods and clubs function as settings for the propagation of capital by bringing similar people together. To the degree that social capital can be converted into economic capital these social contexts can foster the maintenance of capital within classes, especially within privileged classes. The third conversion pertains to economic capital and social capital in the form of trusting, reciprocity-laden relationships with neighbors. Figure 5.1 indicates that income is closely associated with home ownership and that home ownership usually corresponds with living in a house rather than an apartment (the latter usually a rental situation). Home ownership can lead to long-time investment in a neighborhood that then facilitates relationship building with neighbors – and longstanding relationships in turn facilitate the creation of extended norms of reciprocity amongst neighbors. And of course economic profits from longstanding relationships with neighbors are also occasionally forthcoming.

The economic benefits of social capital are more clearly illustrated by the last capital conversion of interest: fluidity between economic capital (and perhaps cultural capital too) and social capital in the form of networks fostered in specified voluntary associations. Figure 5.1 indicates that economic capital and cultural

capital may be transmuted into social connections located in political organizations, community organizations and cultural education/hobby organizations. In addition, economic capital may be specially connected to participation in service clubs, unions or professional organizations, religious organizations, and sports and recreation organizations. On the one hand, the free and flexible time facilitated by economic capital likely facilitates participation in voluntary associations.

> It has been seen, for example, that the transformation of economic capital into social capital presupposes a specific labor, i.e., an apparently gratuitous expenditure of time, attention, care, concern, which, as is seen in the endeavor to personalize a gift, has the effect of transfiguring the purely monetary import of the exchange and, by the same token, the very meaning of the exchange. From a narrowly economic standpoint, this effort is bound to be seen as pure wastage, but in the terms of the logic of social exchanges, it is a solid investment, the profits of which will appear, in the long run, in monetary or other form (Bourdieu, 1986: 253).

More interestingly, as Bourdieu suggests in the latter part of this quotation, participation in these voluntary associations may eventually facilitate the accumulation of financial capital. The transmutation of social capital into economic capital is surely not easily accomplished, requiring the investment of time and energy and careful cultivation of relationships, but it has the potential to pay economic dividends in the long run.

To conclude, relational techniques applied to survey data have the potential to identify important capital conversions operative in a given social setting. In this setting, it appears that social capital in particular comes in multiple forms, adopting various meanings in Canadian social space and appearing in different conversion processes with economic and cultural capital. This does not mean that (for example) educational credentials influence social connections that then influence economic success in the labor market in some linear-causal sense; rather, social connections, educational credentials and economic prosperity attain meaning relative to one another and structure the positions that people can adopt relative to one another in social life. "[T]he space of social positions in retranslated into a space of position-takings through the mediation of the space of dispositions (habitus)" (Bourdieu, 1998: 7). Each of the conversions touched upon here therefore requires further ethnographic exploration in order to understand the meanings associated with these capitals in Canadian social space, the nature of the habitus manifested in various spatial locations and the processes by which conversions between capitals occur.

Chapter 6
The Cumulative Impact of Capital on Dispositions Across Time: A 15 Year Perspective of Young Canadians

Lesley Andres

Abstract In this chapter, I employ detailed longitudinal questionnaire data from the British Columbia, Canada Paths on Life's Way study to examine the ways in which young people's educational dispositions are constructed and shaped by examining how the parents of my study participants transmitted cultural and social capital to them; how they, in turn, have invested and converted the various forms of capital into educational attainment and occupational status; and how the cumulative impact of these experiences and conditions influence the ways in study participants are currently transmitting cultural and social capital to their children. The 15 year horizon of this study allows for a meaningful examination of the Bourdieu's theoretically rich concepts of habitus and capital, by interrogating the intricate "relationship between the structure of hopes or expectations … and the structure of probabilities which constitute the social space" (Bourdieu, 2000a: 211). Through the method of structural equation modelling, an examination of the long term impact of cultural and social capital on dispositions and value sets of parents are limited at best. Two competing explanations of the results are advanced.

6.1 Introduction

Cultural and social reproduction theory as advanced by Bourdieu is well known. Bourdieu (1977a, 1986) asserts that as societies claim to embrace policies that support equality of opportunity, dominant groups increasingly adopt other indirect mechanisms of reproduction. When considering equality of opportunity in post-secondary education, the demise of direct mechanisms of reproduction (ascriptive

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forces such as social position, gender, and race) and adoption of selection policies based on meritocratic criteria, results in the emergence other indirect reproduction mechanisms, in the form of cultural capital and social capital. These forms of capital originate within the family domain, are transmitted via the educational system, and thus converted into educational capital. In this way, social origin, in the guise of cultural and social capital, is able to "exert its influence throughout the whole duration of schooling, particularly at the great turning points of a school career" (Bourdieu & Passeron, 1979: 13).

Central to Bourdieu's theorizing about the transmission of capital is the concept of habitus. The habitus is a system of dispositions which are created and recreated as objective structures and personal history converge. According to Bourdieu, actions (or practices) are neither mechanically determined nor the result of creative free will, but "are determined by past conditions which have produced the principle of their production" (p. 73). He claims that when agents' actions are described as a conscious adjustment of their subjective expectations with their objective chances, it is assumed that everyone has the same set of dispositions with which to invest and the same chances of profiting both materially and symbolically. In reality, the power held by individuals – in the form of the volume and structure of the capital at their disposal and in the form of aspirations and expectations – is very unequal. It is through the regulation of dispositions by the habitus that expectations become universally aligned with objective chances (Bourdieu, 2000a: 216).

The relationship between habitus, capital, and power is key. According to Bourdieu (2000a), parental attitudes towards schooling, and the extent to which they will invest in education to ensure the success of their children, depends on two factors: the degree to which they rely on the educational system to reproduce their own capital and position, and on the likelihood that their educational investments will be successful in relation to the nature and volume of the cultural capital in their possession. As a result, possibilities are determined by the extent of empowerment or potential empowerment, together with a desire for power, an individual or family is able to muster. Through empowerment and the possession of the various forms of capital, habitus as a "can-be" (p. 217) is inclined to produce practices which are objectively adjusted to possibilities.

Possession of certain types and combinations of capital and a certain habitus lead to the ability to anticipate the "game," to determine whether one has a "basic minimum of chances in the game, and therefore power over the game" and hence invest in the "forth-coming" of that game (Bourdieu, 2000a: 220). According to Bourdieu, in order to play the game in a given field (e.g., the economic world) one must master some level of power over it through the possession at least a minimum of economic and cultural capital.

Bourdieu (2000a) asserts that in an economic and social world of unequal distribution of powers, the "universe of possibles" (p. 225) is not equally accessible to everyone. The ability to profit is instead replaced by "a signposted universe" (p. 225) replete with differentiated stable chances that lead to the realization of stable expectations. He maintains "that capital in its various forms is a set of pre-emptive rights over

the future; it guarantees some people the monopoly of some possibles although they are officially guaranteed to all (such as the right to education)" (p. 225).

Dispositions are durably instilled by objective conditions, and the resulting aspirations and practices generated are objectively compatible with those conditions. Power governs aspirations and the greater one's level of power over their world, the more likely is it that one's aspirations and the chances of realizing them are aligned. As a result, the most improbable aspirations and practices are excluded from one's repertoire of choices. Exclusion results as either unthinkable, and therefore not examined, or as a result of double negation which reframes necessity into a virtue in that individuals "refuse what is anyway refused and love the inevitable" (Bourdieu, 1977a: 77). Bourdieu calls this the hysteresis effect, where behaviours and practices are vulnerable to negative sanction when individuals are faced with an environment or situation that is too remote from the one to which they are objectively and "naturally" fitted (Bourdieu). Hysteresis of habitus is inherent in the social conditions of the reproduction of the structures in habitus, leads to a structural lag exists between opportunities and the dispositions to grasp them; hence opportunities are missed. Elster (1983) points to the similar mechanism of "sour grapes," a cognitive dissonance reduction mechanism that operates to ensure that no options outside the opportunity set is preferred to the most preferred option within it.

The concept habitus resonates at both at the individual level and group or class level. Group or class habitus exists because individuals of a particular class or group are exposed to homogeneous conditions of existence and because they internalize the same objective structures, they are the product of such dispositions. Hence, group or class habitus enables practices to be objectively harmonized without conscious intention, explicit co-ordination, or direct interaction; in other words it occurs as "conductorless orchestration." Those occupying the same class are endowed with objective meanings that are both unitary and systematic, and transcends "subjective intentions and conscious projects whether individual or collective" (Bourdieu, 1977a: 81).

Most research employing Bourdieu's theory of reproduction focuses primarily on the effects of cultural and social capital. These constructs are usually measured as and operationalized through indicators such as parental educational and occupational attainment and parental influence. Analyses are often confined to the examination of relationships between these indicators and single, relatively short term outcomes such as type of experiences within the educational system (Lareau, 2000; Lareau & Weininger, 2003), educational stream completed in high school, or educational aspirations (Dumais, 2002). In some studies, other manifest indicators such as attendance at cultural events such as the opera or number of books in the home (e.g., DiMaggio, 1982) are used to assess their effects on similar outcomes.

However, habitus is an essential but often neglected part of the equation. According to Bourdieu (1984a), practices (action) can only be accounted for by illuminating the series of effects which underlie them. He proposes that the following formula be used to analyse these effects:

[(habitus) (capital)] + field = practice (p. 101)

To comprehend the long term impact of capital and habitus, analyses over a considerably long period of time are necessary. Unlike many studies, the *Paths on Life's Way* data set contains detailed questionnaire data on three generations – a cohort of respondents, their parents, and their views about what counts as capital for their own children. The analyses in this paper are both theoretical and methodological extensions of earlier analyses on this data set. In earlier analyses, I (1992, 1998) endeavoured to demonstrate the processes by which one becomes a member of the non-participant, non-university or university participant group. Non-participants are those individuals who have never participated in post-secondary studies. Non-university participants have attended a non-university institution for at least 1 month and university participants have been enrolled in universities for at least 1 month. Analyses illustrated how the intersecting fields of family relationships, families as sources of cultural capital, and relationships with school personnel and peers influenced the amount of academic capital in one's possession. In turn, based on academic capital as evidence, and given one's beliefs and dispositions, decisions regarding whether and where to participate in post-secondary education were made. On the basis of the findings of these analyses, I concluded that rather than being "rational," choices regarding post-high school destination, were based on a "logic of practice" (Bourdieu, 1990a) continued to be influenced by parental transmission of cultural and social capital. In this paper, I employ data over a 15 year horizon to examination of the cumulative impact of these experiences and conditions over time.

6.2 Research Design

The Paths on Life's Way Project is the only longitudinal study of its kind in British Columbia and is one of the few longitudinal studies of young adults in Canada (Andres, 2002a, b, c, d). The research, now spanning 15 years, provides a detailed account of individuals' lives, choices, and post-secondary education and work experiences across different points in time since high school graduation in relation to changing economic, social, and cultural conditions. Specifically, the data base contains information on education, occupation, and geographic mobility on a provincially representative sample of over 733 individuals from the BC high school graduating Class of 1988 collected by mail questionnaires in 1989, 1993, 1998 and 2003.

The first phase of the study consisted of a 1989 postal survey focusing on the educational choices made by a large systematic sample of 1988 high school graduates (n = 5,345). The study included post-secondary participants and non-participants from all school districts in British Columbia (see Andres, 2002a for a detailed description of the sample including attrition). High school and post-secondary records, providing demographic, academic achievement and institutional information, were linked to the questionnaire data. In 1993, a second follow-up of the 1989 study was carried out. Individuals who had completed the first survey were contacted by mail, and a total

of 2,030 completed the 1993 follow-up survey.[1] The third follow-up, conducted in 1998 resulted in the return of 1,055 completed surveys. In 2003, a fourth follow-up was conducted, with 733 individuals (70% of the 1998 respondents) completing and returning questionnaires. The final sample represents 7% of the original 1988 sample and a full 3% of the entire BC high school graduating cohort of that year. All follow-ups were conducted with those who responded to earlier waves of the questionnaire.

In this chapter, I use these detailed longitudinal questionnaire data to examine the ways in which young people's dispositions are constructed and shaped by examining how the parents of the study participants transmitted cultural and social capital to them; how they, in turn, have invested and converted the various forms of capital into educational attainment; and how the cumulative impact of these experiences and conditions influence the ways in study participants are currently transmitting cultural and social capital to their children. The 15 year horizon of this study allows for a meaningful examination of the Bourdieu's theoretically rich concepts of habitus and capital by interrogating the intricate "relationship between the structure of hopes or expectations … and the structure of probabilities which constitute the social space" (Bourdieu, 2000a: 211).

6.3 Method of Analysis

The first purpose of these analyses is to specify a measurement model of values that respondents to the *Paths* project hold for their children. The second purpose is to test, in a sequential manner, the enduring effects of parents as sources of cultural and social capital over time. That is, to what extent do parents (Generation 1), through the transmission of cultural and social capital influence their children's dispositions (Generation 2) toward post-secondary participation? In turn, are these dispositions converted into post-secondary completion status 10 years following high school graduation? To what extent does social and cultural capital

[1] When the 1989 respondents (n = 5,345) are compared with the original target sample (n = 10,000), the sample is biased slightly toward women. The original target sample included 52% females and 48% males. In 1989, 57% women and 43% men responded to the Phase I follow-up. When comparing the 1989, 1993 and 1998 follow-ups, the sample has remained remarkably stable in terms of gender composition, age, and geographic location. In 1998, respondents from 71 of 75 school districts existing at the time remained in the study. A table of response rates in relation to a question about post-secondary status in 1989 can be found in Andres (2002a http://www.bccat.bc.ca/pubs/andres2002.pdf). This table demonstrates that university participants in 1989 were more likely to stay in the study over time, and non-participants were not. Revision of this table to include the 2003 data reveals that the proportion of those who were post-secondary participants changed from 76% in 1989 to 83% in 2003. The proportion of females in the study in 1989 was 56%; in 2003 it was 60%. In 1989, the proportion of respondents with mothers educated at low, medium, and high levels was 50%, 32%, and 18%. In 2003, these proportions were 44%, 35%, and 21%, respectively.

transmitted by the respondents' parents influence the values these respondents hold for their own children (Generation 3)?

For the following analyses, structural equation modelling using LISREL analyses was carried out within the STREAMS environment. Structural equation modelling (SEM) consists of two parts. The first part, the measurement model, specifies how the latent variables or hypothetical constructs are measured in terms of the observed variables, and it describes the measurement properties (validities and reliabilities) of the observed variables. The second part, the structural equation model, specifies the strength of relationships among the latent variables and provides measures of explained and unexplained variance (Jöreskog & Sörbom, 1989). The STREAMS program facilitates analyses of data using structural equation modelling techniques by providing a user-friendly interface, efficient specification of complex models with multiple groups, and efficient start values for complex models (Gustafsson & Stahl, 1997).

In Analysis 1, a four construct measurement model of educational values held by respondents for their children 15 years following high school graduation is tested. Analysis 2 examines the relationships among respondents' parents as sources of cultural and social capital, academic achievement in high school, post-secondary attainment and dispositions toward post-secondary education 10 years following high school graduation. In Analysis 3, the four constructs developed in Analysis 1 are added to the model. Each step of these analyses, and their related results, are described below.

6.3.1 Analysis 1

In 2003, respondents were asked to respond to the following two questions about their children: "When it comes to schooling these days, how important are the following for your children?" and "How important are the following in ensuring your child's future wellbeing?" Respondents were invited to answer these questions even if they did not have children. Ten items were associated with the first question and 15 items were associated with the second question. Confirmatory factor analysis conducted in LISREL resulted in a four construct measurement model with 17 of the 25 items loading significantly onto these factors.

The four constructs and their associated factors are as follows: The construct *academic literacy* (ACADLIT) is measured by four indicator variables: computer literacy, good reading skills, mathematical literacy, and scientific literacy. An additional manifest variable, leadership opportunities loads on to this and the following construct. *Educational enrichment* (EDENRICH) is measured by four indicators – specialized learning opportunities (e.g., music, athletics), participation in fine arts, opportunities for educational enrichment (e.g., gifted programs), and leadership opportunities. The construct *culture* (CULTURE) is measured by five indicators, including exposure to people/children from other cultures, knowledge of one's own culture, knowledge of society, knowledge of French, and knowledge of other languages. Finally, indicators of *cooperative skills* (COOPSK) include a close circle of friends, a large circle of friends, cooperative skills, and competitive skills (see Fig. 6.1).

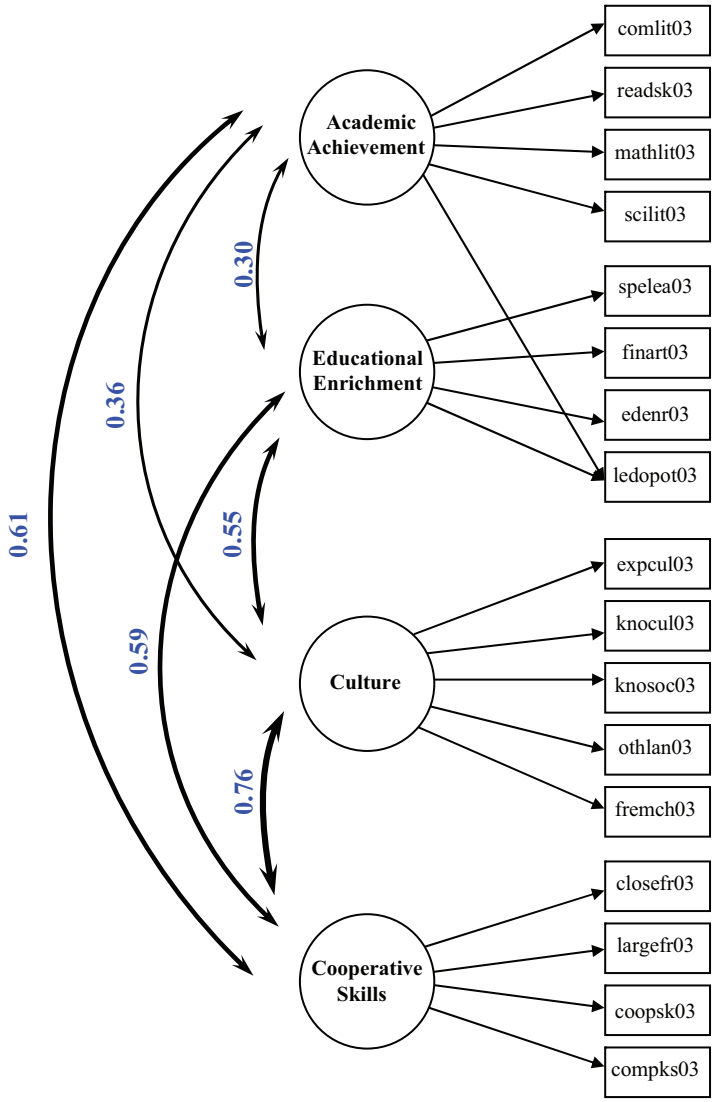

Fig. 6.1 ACADLIT academic literacy; COMLIT03 computer literacy; READSK03 good reading skills; MATHLIT03 mathematical literacy; SCILIT03 scientific literacY; EDENRICH educational enrichment; SPELEA03 specialized learning opportunities; FINART03 participation in fine art; EDENR03 opportunities for educational enrichment; LEDOPOT03 leadership opportunities; CULTURE culture; EXPCUL03 exposure to people/children from other cultures; KNOCUL03 knowledge of one's own culture; KNOSOC03 knowledge of society; FREMCH03 knowledge of French; OTHLAN03 knowledge of other language; COOPSK cooperative skills; CLOSEFR03 close circle of friends; LARGEFR03 a large circle of friends; COOPSK03 cooperative skills; COMPSKI03 competitive skills

In total, 733 individuals completed all waves of the survey (1989, 1993, 1998, 2003). However, listwise deletion of incomplete cases reduced the total sample size to 378.[2] Analyses using covariance matrices and the maximum likelihood fit function were conducted. Subsequent models were estimated to determine the effects of alterations to the initial model, as guided by the modification indices, t-values, and standardized residuals, and in particular, within the limits imposed by theory. A χ^2 (df = 107) value of 177.71, $p < 0.001$ and RMSEA of 0.041 indicates a good correspondence between the covariance matrix estimated by the model and the original covariance matrix.[3]

As indicated in Fig. 6.1, the constructs are correlated with each other. The lowest correlation of 0.30 occurs between *academic literacy* and *educational enrichment* and the highest (0.76) between *culture* and *cooperative skills*.

6.3.2 Analysis 2

In Analysis 2, the first stage of the structural model is portrayed. Questionnaire data from the 1989 and 1998 survey provide information about parental background and influence on post-high school plans, educational aspirations and expectations in 1989, post-secondary completion status in 1998 and dispositions toward post-secondary education in 1998. High school records were matched to survey data and provided information on curricular differentiation, and grade point average achieved in high school.

The model includes six constructs.[4] The construct *sources of cultural capital* (CULTCAP) is measured by three indicators of mothers and father's education and father's occupation. *Sources of primary social capital* (PRIMSOC) includes two measures of parents' influence on educational plans. *Academic capital* (ACADCAP) is comprised of three indicators – grade point average in two subject areas (Grade 11 social studies and Grade 12 English), and the type of program undertaken in high school as measured by the number of provincial examinations taken. Measures of respondents' educational aspirations and expectations are used to form the

[2] In other analyses (Andres & Gustafsson, 2002) we employed missing data analyses of structural equation models not dissimilar from part of the current analysis. We concluded that missing data analyses led to the conclusion that by using all the data in the form of missing data modelling, estimates with less bias are produced. However, substantively, the results of analyses without missing data are very similar. In all of these examinations, the degree of sample bias does not suggest that the findings of this report can be generalized with caution. In other words, the findings could be considered the "best case scenario."

[3] RMSEA refers to the root mean square error of approximation and is indicative of model fit. Typically, an RMSEA of less than 0.05 is considered a good fit.

[4] The figures for each analysis are not included in this chapter. The coefficients reported for the total model (Analysis 3) in Fig. 6.2 are almost identical to those corresponding to the separate analyses.

construct *dispositions toward post-secondary education* (DISP89). The construct *post-secondary completion status in 1998* (STATPS98) is measured by one indicator – highest educational credential earned. Five measures of respondents' *dispositions toward post-secondary education in 1998* are used to form the construct (DISP98). Hypothesized relationships were informed by theory and based on previous analyses (Andres, 1992, 1998).

The χ^2 (df = 89) for this model was 144.08, $p < 0.001$ with an RMSEA of 0.039. Analysis 2 reveals that *parents as sources of cultural capital* exert a moderate direct influence on the *academic capital* possessed by their children. The direct effect of parents as *sources of primary social capital* on *academic capital* is insignificant and its effect on *dispositions in 1989* is small, as is the direct effect of *parents as sources of cultural capital* on *dispositions in 1989*. In other words, whereas more highly educated parents have a greater influence on academic success in high school, the effect of *parents as sources of social capital* alone is small. There is a modest correlation between these two exogenous constructs.

The relationship between *academic capital* and *dispositions in 1989* (i.e., 1 year after graduating from high school) is strong at 0.79 and its effect on *post-secondary completion status in 1998* is moderately strong. However, the direct relationship between *academic capital* and *post-secondary completion status in 1998* is weak.

The antecedent variables in this study have direct, indirect and total effects on the two dependent variables – *post-secondary status in 1998* and *dispositions in 1998* (Tables 6.1 and 6.2).[5] *Parents as sources of cultural capital* exert a modest to moderate indirect effect on both dependent variables. The total effect of *academic capital* on *dispositions in 1998* is moderately strong and primarily indirect.

6.3.3 Analysis 3

By adding the four constructs developed in Analysis 1 to the model, data on three generations collected over the 15 years between 1989 and 2003 are employed in the analysis.[6] The model (Fig. 6.2) includes ten constructs, 6 of which – CULTCAP, PRIMCAP, ACADCAP, DISP89, STATPS98 and DISP98, and their respective manifest variables – are the same as in the second analysis. Four additional constructs – ACADLIT, EDENRICH, CULTURE, and COOPSK measured by the indicators described in Analysis 1 and Table 6.1 are included in the model (see Table 6.1). The addition of four additional constructs – *academic literacy* (ACADLIT), e*ducational enrichment* (EDENRICH), *culture* (CULTURE), and

[5] The tables for each analysis are not included in this chapter. The coefficients reported for the total model (Analysis 3) in Tables 6.1 and 6.2 are almost identical to those corresponding to the separate analyses.

[6] High school transcript data are from the years 1986–87 (Grade 11) and 1987–88 (Grade 12); more accurately, this study spans 17 years.

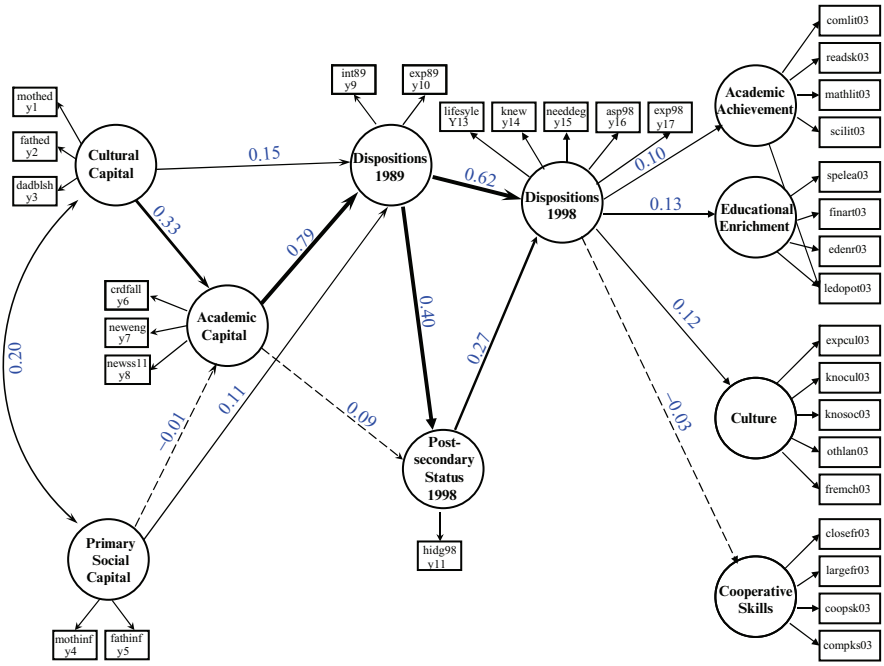

Fig. 6.2 CULTCAP *sources of cultural capital*; MOTHED mother's education; DADED father's education; DADBLISH father's occupation; PRIMSOC *sources of primary social capital*; MOTHINF mother's influence on educational plans; FATHINF mother's influence on educational plans; ACADCAP *academic capital*; CRDFALL number of provincial examinations taken; NEWENG Grade 12 English grade point average; *NEWSS11 Grade 11 social studies grade point average*; DISP89 *dispositions toward post-secondary education in 1989*; INT89 highest level of education wanted in 1989; EXP89 highest level of education expected in 1989; STATPS98 *post-secondary completion status in 1998*; HIDG98 highest educational credential earned; DISP98 *dispositions toward post-secondary education in 1998*; LIFESTYLE to attain the lifestyle I want, I must have a university degree; KNEW I always knew that I would continue to post-secondary education following high school; NEEDDEG I need a university degree to earn a decent income; ASP98 highest level of education wanted in 1998; EXP98 highest level of education expected in 1998. The remainder of the variables are the same as Figure 1.

cooperative skills (COOPSK) – allows me to examine the extent to which parents (Generation 1) transmit cultural and social capital to their children (Generation 2), whether it is converted into educational credentials, and if these credentials and dispositions influence the values respondents of this study hold for their own children (Generation 3).

A χ^2 (df = 530) value of 717.36, $p < 0.001$ with an associated RMSEA of 0.031 together with an examination of the standardized residuals, Q-plots, and modification indices reveal a good fit of the data to the model.

Results for Analysis 3 reveal that estimates of relationships among the first four constructs are virtually unchanged to those reported above. The direct relationships between *dispositions in 1998* and the four dependent variables range from

Table 6.1 Total effects on antecedent variables – 2003 (standardized regression coefficients)

	CULTCAP	PRIMCAP	ACADCAP	DISP89	STATPS98	DISP98	ACADACH	EDENRCH	CULTURE	COOPSK
CULTCAP	–	–	–	–	–	–	–	–	–	–
PRIMCAP	–	–	–	–	–	–	–	–	–	–
ACADCAP	0.33	0.01	–	–	–	–	–	–	–	–
DISP89	0.40	0.10	0.79	–	–	–	–	–	–	–
STATPS98	0.21	0.04	0.46	0.40	–	–	–	–	–	–
DISP98	0.31	0.07	0.61	0.72	0.27	–	–	–	–	–
ACADACH	0.03	0.01	0.06	0.07	0.03	0.10	–	–	–	–
EDENRICH	0.04	0.01	0.08	0.10	0.04	0.13	–	–	–	–
CULTURE	0.04	0.01	0.07	0.09	0.03	0.12	–	–	–	–
COOPSK	–0.01	0.00	–0.02	–0.02	–0.11	–0.33	–	–	–	–

Table 6.2 Direct, indirect, and total effects of antecedent variables on dispositions in 1998, academic literacy, educational enrichment, culture and cooperative skills in 2003 (standardized coefficients)

	Direct effects	Indirect effects	Total effects
Dispositions in 1998			
Cultural capital	*–	0.31	0.31
Primary social capital	*–	0.07	0.07
Academic capital	*–	0.61	0.61
Dispositions in 1989	0.62	0.10	0.72
Post-secondary status in 1998	0.27	**–	0.27
Academic achievement in 2003			
Cultural capital	*–	0.03	0.03
Primary social capital	*–	0.01	0.01
Academic capital	*–	0.06	0.06
Dispositions in 1989	*–	0.07	0.07
Post-secondary status in 1998	*–	0.03	0.03
Dispositions in 1998	0.10	**–	0.10
Educational enrichment in 2003			
Cultural capital	*–	0.04	0.04
Primary social capital	*–	0.01	0.01
Academic capital	*–	0.08	0.08
Dispositions in 1989	*–	0.10	0.10
Post-secondary status in 1998	*–	0.04	0.04
Dispositions in 1998	0.13	**–	0.13
Culture in 2003			
Cultural capital	*–	0.04	0.04
Primary social capital	*–	0.01	0.01
Academic capital	*–	0.07	0.07
Dispositions in 1989	*–	0.09	0.09
Post-secondary status in 1998	*–	0.03	0.03
Dispositions in 1998	0.12	**–	0.12
Cooperative skills in 2003			
Cultural capital	*–	–0.01	–0.01
Primary social capital	*–	0.00	0.00
Academic capital	*–	–0.01	–0.02
Dispositions in 1989	*–	–0.01	–0.02
Post-secondary status in 1998	*–	0.01	0.01
Dispositions in 1998	–0.03	**–	–0.03

*No direct path hypothesized.
**No indirect path hypothesized.

non-significant to moderately weak. The strongest of the relationships is between the effects of *dispositions in 1998* on *educational enrichment* and *culture*.

The total effects of the antecedent variables on the four value constructs are weak or non-existent. The strongest total effects are between *dispositions in 1989* and *educational enrichment in 2003* at 0.10 and *dispositions in 1989* and *culture in 2003* at 0.09 (Table 6.2).

In Analysis 4, one additional construct – *occupational status in 2003* (WORK03) was added to the model. As with the other analyses, the model fit remains good (χ^2 (529) 772.78, $p < 0.001$ with a RMSEA of 0.032. In relation to Analysis 3, the

effect of *dispositions in 1998* on the four dependent variables remains unchanged. Since Analysis 4 does not add anything substantive to the analysis, Analysis 3 is used as the final model in this chapter.

6.4 Discussion

As the total effects of the antecedent models on the dependent variables indicate, there is a moderate to strong enduring relationship between cultural capital as transmitted by parents, academic capital earned by their children, dispositions across three time points, and educational outcomes 10 years later, respectively. These effects are cumulative. That is, parents influence academic achievement and dispositions, which are then converted by their children into educational and occupational outcomes.

However, when constructs representing four value sets that respondents hold for their children are added to the model, the relationships between these value sets and dispositions of their parents directly, and the long term impact of cultural capital indirectly, is limited at best. It would be reasonable to draw the conclusion that over successive generations, the cumulative transmission of cultural capital dissipates. It could also be argued that in a system of mass higher education where the majority of respondents (95%) have participated in and 78% have completed some form of post-secondary studies, the values individuals hold for their children has increased overall. In other words, regardless of one's family background, post-secondary history, or occupational status, each respondent wants her or his children to be academically literate, educationally enriched, cultured, and to have developed cooperative skills. In terms of values about higher education, it may be that this group has been exposed to homogeneous conditions of existence, and that collectively, their values have become homogenized because of internalization of the same objective structures. In Canada, education has been embraced as a clear route to upward mobility, the way to get "good" rather than "bad" jobs, and hence maximize one's life chances. For those born around 1970 in British Columbia in particular, and Canada in general, there were (and are) multiple possibilities to enrol in and complete post-secondary studies. Views about education by this group could have been objectively harmonized through "conductorless orchestration" (Bourdieu, 1977a: 81) – that is, without conscious intention, explicit co-ordination, or *direct interaction*. It could be argued that as the post-secondary system expanded, views promoting higher education coalesced and the labour market shifted from an industrial to a knowledge economy.

Modest as they may be, however, there are differences in the values individuals hold for their children and these differences are related to dispositions that have been formulated in relation to the transmission of cultural capital over a long period of time. Whereas there is no relationship between the level of dispositions held by parents for their children regarding cooperative skills, there is a weak relationship between dispositions of parents 10 years following high school graduation

and their views about academic literacy, educational enrichment, and culture. As earlier analyses have shown (Andres, 1992, 1998), when a construct measuring beliefs about post-secondary education was included in the model, there were no significant relationships between this construct and others (e.g., parents as sources of cultural and social capital; academic capital; post-secondary status). Perhaps, it is as Bourdieu (2000a) claims,

> below a certain level … aspirations burgeon, detached from reality and sometimes a little crazy, as if, when nothing was possible, everything became possible, as if all discourses about the future – prophesies, divinations, predictions, millenarian announcements – had no other purpose than to fill what is no doubt one of the most painful of wants: the lack of a future (p. 226).

In other words, it may not be not sufficient to examine the values individuals hold for their children in isolation of actions – for example, the types of educational programs in which their children are enrolled, extracurricular activities in which they engage, or achievement levels earned. The conclusion to this story requires an even broader horizon which includes the educational and post-secondary choices and achievements of generation 3. As Bauman (2000) states, such an examination must be conducted through the lens of a new world order of liquefied and increasingly privatized institutional structures and multiple paths and options where self-reallocation into the "right and proper … ready made niche" (p. 7) of this order may be much more challenging than for those who had the security of "solid" public policies and institutions that provide shape to journeys and outcomes.

Chapter 7
The Influence of Cultural Capital on Educational and Early Labour Market Outcomes of Young People in Australia

Gary N. Marks

Abstract Cultural capital is theorized as having a substantial influence on the educational and labour market outcomes of young people, contributing to social reproduction by mediating the effects of socioeconomic background. A number of empirical studies have found impressive effects for cultural capital on a variety of outcomes, but only a limited mediating role. Studies which show effects for cultural capital may be criticised for not incorporating a sufficient array of controls for background factors and the possibility that the observed effects for cultural capital are largely due to reading behaviour rather than participation in elite culture, since both are usually components of cultural capital measures. These issues are examined in this chapter by examining the effects of cultural capital on educational and early labour market outcomes in Australia. The data analysed are from a national longitudinal study of young Australians surveyed between 1995 and 2005. It finds that cultural capital only weakly mediates the effects of socioeconomic and social background. Its effects on educational outcomes are relatively strong, comparable or larger than the effects of parents' education and occupation, and wealth. However, its effects can be attributed to reading in general, not to participation in elite culture. The effect of cultural capital on occupational attainment was weaker than the effects of parents' occupation and wealth, and comparable to that of parental education and substantially is mediated through achievement in literacy and numeracy. The effects of cultural capital on earnings was negative, largely due to the limited employment experience of those with higher levels of cultural capital.

7.1 Introduction

Cultural explanations of educational outcomes are prominent in both the sociological and educational literature. They argue that particular social groups have distinct cultural attitudes and practices that facilitate or hinder their economic

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K. Robson and C. Sanders (eds.), *Quantifying Theory: Pierre Bourdieu*,

and social opportunities and therefore 'culture' contributes to the reproduction of socioeconomic inequalities. A prominent proponent of cultural approaches is Bourdieu (1977b, 1984a) who argues that the success of students from high status backgrounds, who are adept in the dominant culture, is enhanced because teachers and other gatekeepers judge and assess students by the criteria set by the dominant culture. Therefore, the curricula, the methods of assessment and the very organization of education systems create hurdles, which those without the cultural know-how find difficult to overcome. However, Bourdieu's theory of cultural capital is not characterized by precisely measured concepts and strong empirical support (Kingston, 2001; Lamont & Lareau, 1988).

Cultural capital theory is based on the assumption that there is a strong association between cultural capital and socioeconomic background. However, empirically the relationship is, at best, only moderate. DiMaggio (1982) comments that cultural capital is 'less strongly tied to parental background' than is often assumed (see also DiMaggio & Mohr, 1985). Crook (1997: 81) reports correlations of only 0.3 and 0.4 between participation in 'high' cultural activities and father's occupation and parent's education. Sullivan (2001) notes large residual effects of social class when controlling for cultural factors. After reviewing the literature, Kingston (2001: 88) concludes that "cultural capital does not substantially account for the relationship between social privilege and academic success". A related point is that cultural capital theory assumes the relationship between socioeconomic background and educational outcomes is very strong whereas empirical work indicates that the relationship is far from deterministic.

The link between cultural capital and educational success is well known, at least for the United States. DiMaggio (1982) shows that cultural participation among US high school students was positively associated with school grades in English, History and Mathematics. This finding is impressive since these effects were net of measured cognitive ability and socioeconomic background. The effects of cultural participation were reasonably large with standardized coefficients of around 0.2 on grades in English and History (but lower for Mathematics), larger than the effect of father's education. In a follow-up study, DiMaggio and Mohr (1985) established that cultural participation was also associated with years of education, college attendance and college graduation. However, such strong evidence has not been replicated elsewhere. For the United Kingdom, Sullivan (2001) found that although students' cultural participation was significantly related to students' score in the British General Certificate of Secondary Education (GCSE), the effect was not significant after controlling for students' linguistic ability and vocabulary. For Greece, Katsillis and Rubinson (1990) found no effect of students' cultural participation on grade point average. Similarly, Crook's (1997: 86–108) Australian study did not find significant effects of students' cultural participation on most educational outcomes. Kingston (2001) points out the effects of cultural capital observed in some studies may be due to inadequate model specification, in that important influences are not included.

Although some studies point to the importance of cultural capital on education outcomes, the less attractive explanation is that reading, rather than familiarity with elite culture, is the important component. DiMaggio's (1982) measure of cultural capital included reading as well as participation in cultural activities. Crook (1997:

86–104) created separate measures and found significant effects for reading on educational outcomes but no significant effects for cultural participation. Similarly in West Germany and the Netherlands, the effects of *parental* reading behaviour on educational outcomes were stronger than the effects of parental participation in cultural activities (De Graaf, 1988; De Graaf, De Graaf, & Kraaykamp, 2000).

Cultural capital theory implies that students adept in the dominant culture should perform better in all contexts. However, Di Maggio (1982) found that the effects of cultural capital were stronger for English and History than for Mathematics. By extension, the theory should apply to the labour market. Workers possessing cultural capital being more adept in the dominant culture would impress their supervisors, employers or clients and thus be duly rewarded.

The analyses presented in this chapter address the issues canvassed above. It examines the extent to which cultural capital mediates the effects of socioeconomic background on a range of educational and labour market outcomes. Three measures of socioeconomic background are included in the analyses to guard against the possibility of spurious interpretations of the effects of cultural capital. These analyses indicate the importance of cultural capital relative to other socioeconomic influences. The analyses include separating cultural capital into its reading and cultural participation components.

To examine whether the benefits of cultural capital are limited to the humanities, the educational outcomes analyzed include literacy, numeracy and general performance for university entrance. Students' tertiary entrance performance in the last year(s) of school is the most important educational outcome for Australian students. University participation is also analysed, guided by the hypothesis that cultural capital contributes to university participation over and above the effects of school performance. In order words, students with higher levels of cultural capital tend to choose university study rather than alternatives.

These analyses also examine the way in which cultural capital is mediated by subsequent factors. For example, the impact of cultural capital on university entrance performance may be direct or via student achievement. The effect of cultural capital on labour market outcomes may be direct or mediated through school performance, qualifications or labour market experience.

7.2 Data, Measures and Methods

The data used for these analyses are from a longitudinal survey of a cohort of Australian students who were in Year 9 in 1995. The study comprises 11 waves of data collected between 1995 and 2005. The original two-stage sample was drawn by first randomly selecting schools with probabilities proportionate to size using strata defined by state (and territory) and school sector (government, Catholic and independent). The original sample comprising 13,613 students from all states and territories and school sectors is representative of the population of Year 9 students at school in Australia in 1995. Weights were constructed to adjust for differences between the original sample and the population from which the sample was drawn. A second set

of weights based on achievement quartiles and gender were constructed to adjust for year-to-year attrition. The design provided a representative sample of about 10,000 young people in the 1997 which was the basis for the longitudinal study.

Cohort members' occupations and earnings change from year to year. Similarly, post-secondary qualifications are not 'time-invariant'. To analyze all the annual data on respondents' occupations and earnings, it was necessary to construct a 'stacked' person-year data set for all waves between 1997 and 2005. It is a multilevel data set with person-year data at the first level clustered within persons (or respondents) at the second. There is up to 9 person-years of data for each respondent.

7.2.1 Measures

7.2.1.1 Cultural Capital Measures

Cultural capital was measured by students' responses to a battery of items on their leisure activities. Table 7.1 presents the distributions of the items considered for the measure of cultural capital.

Table 7.2 presents the results of the scale analysis of the items. (The items were reverse scored so that high scores reflect greater participation.) The newspaper/magazine item was not included in the constructed scale since the Cronbach's alpha of the scale increases if the item is deleted (see Table 7.2). The Cronbach's alpha or reliability of the resulting measure of cultural capital is 0.77 (see Table 7.3). In order to distinguish the impact of reading from cultural participation on outcomes, two subscales were constructed based on the two reading items (library and reading books) and the five cultural participation items. The reading measure is not limited to 'high culture' reading but includes any type of reading material (except newspapers and magazines). The statistical properties of the three summary scalar measures are presented in Table 7.3.

Table 7.1 Frequency distributions of cultural capital items

	Percentages				
Item	At least once a week	At least once a month	At least once a year	Less than once a week	Never
Go to a library	14.7	38.2	30.0	8.7	8.4
Read books	32.0	35.4	21.9	5.4	5.3
Read papers and magazines	71.5	23.8	3.5	0.5	0.7
Go to museums	0.3	2.6	30.3	34.4	32.4
Go to art galleries/ exhibitions	0.6	4.8	28.3	30.1	36.3
Go to concerts	1.8	11.9	45.1	21.7	19.6
Go to a play at a theatre	0.9	5.1	30.0	25.1	39.0
Listen to classical music	7.4	11.1	14.7	15.2	51.6

Table 7.2 Scale analysis of cultural capital items

Item	Observations	Mean (on scale 0–4)	Standard deviation	Correlation with scale	Cronbach's alpha when item deleted
Go to library	9,716	2.42	1.10	0.48	0.75
Read books	9,703	2.83	1.10	0.46	0.75
Read papers and magazines	9,717	3.65	0.64	0.21	0.79
Go to museums	9,731	1.04	0.87	0.61	0.72
Go to art galleries/ exhibitions	9,706	1.03	0.94	0.64	0.72
Go to concerts	9,695	1.55	0.99	0.40	0.76
Go to a play at a theatre	9,713	1.04	0.98	0.58	0.73
Listen to classical music	9,733	1.08	1.33	0.43	0.76

Table 7.3 Statistical properties of summary scales

Item	Observations	Mean (on scale 0–4)	Standard deviation	Cronbach's alpha
Cultural capital	9,774	1.56	0.97	0.77
Reading	9,779	2.63	0.97	0.72
Cultural participation	9,765	1.15	0.75	0.79

7.2.1.2 Background Measures

Language Background distinguishes between students' households where the main language spoken at home was English, and households where English was not the main language spoken.

Location is measured by three categories (metropolitan, regional and rural or remote) based on the number of people in the locality of the students' households in 1995.

The measure of *Parents' Occupation* is based on respondents' reports on the occupations of their parents. The occupations were then coded (at four-digit level) according to the first edition of the Australian Standard Classification of Occupations (ASCO) schema. Occupational status scores were then assigned according to the ANU3 measure (Jones, 1989).

The measure of *Parents' Education* is the average number of years of formal education for the respondents' parents converted from information on the highest educational level completed.

Wealth is an additive scale based on the presence or absence of certain household possessions at the students' home in 1996.

School sector refers to the type of school attended at the time of sample selection. It comprises three categories: government, Catholic and independent. The

proportion of Year 9 students in 1995 attending each school type are about 70%, 20% and 10% respectively.

7.2.1.3 Qualifications and Labour Market Experience Measures

Each year, respondents were asked relating to their level of educational or vocational qualifications. The following measures of qualifications were constructed:

Apprenticeships which involve working on a training wage for an employer for 3 or 4 years.

Traineeships which are similar to apprenticeships but are of much shorter duration (about a year) and involve white collar rather than trade work.

TAFE Certificates are 1 or 2 year vocational courses at college of Technical and Further Education (TAFE).

TAFE Diplomas are higher level TAFE courses.

University Diplomas (or Associate degrees) entail a 2 year course of study at a university.

Bachelor Degrees entail a 3 or 4 year course of study at a university.

Post-Graduate Degrees includes Masters and Ph.D. degrees.

Other, includes other post-secondary courses most offered by private providers.

The measure of *Work Experience* is the proportion of time since leaving full-time education up until the date of interview spent in paid employment (not including concurrent time spent in full-time study).

7.2.1.4 Outcome Measures

Student Achievement in Literacy and Numeracy

The measures of student achievement were based on students' performance in literacy and numeracy tests mentioned earlier. Scores for each test ranged from 0 to 20. The measure of achievement used as predictor of subsequent outcomes was constructed by taking the respondents' mean test scores.

Tertiary Entrance Performance

Tertiary entrance performance was measured by students' Equivalent National Tertiary Entrance Rank (ENTER) scores which were obtained from self-reports in the 2000 telephone interview. ENTER scores are percentiles ranging from 30 to 99.95.[1] A score of 90 means the student's tertiary entrance was higher than 90% of the cohort.

[1] ENTER scores in all states except Queensland are understood as equivalent. For Queensland students who obtained an Overall Position (OP), their OP scores were converted to ENTER scores according to the equivalence scales constructed by the Taskforce on an Australian Tertiary Admissions System.

Occupational Status

At each annual interview, respondents were asked about their current job. Occupational data collected between 1997 and 1999 were coded in accordance with the first edition ASCO schema, while occupational data collected after 1999 were coded according to the second edition (ABS, 1990/91, 1997). ANU3 scores were constructed from the ASCO first or second edition four digit codes (Jones, 1989; McMillan & Jones, 2000). Scores were scaled to range from 0 (low status) to 100 (high status). Employment concurrent with full-time study was excluded from the analysis of occupational status.

Earnings

Earnings are defined as the money received from paid employment. The few that were self-employed were asked their weekly earnings. From these questions, measures of weekly earnings were constructed. Using ABS statistics on the Consumer Price Index (ATO, 2006), all earnings measures were adjusted so they were in the common metric of 2005 dollars. For the regression analyses reported in Table 7.8 weekly earnings were converted to logged weekly earnings (by taking the natural logarithms of adjusted earnings) to reduce the influence of outliers and the skewed distribution of earnings. Because of the large number of respondents working part-time while in full-time study the analyses of earnings were restricted to the years 2001–2005 (inclusive) yielding 27,218 observations.

7.2.2 Methods

Sequential regression models were used to show: (1) the impact of cultural capital on the respective outcome; (2) the extent that cultural capital mediates the effects of socioeconomic (and social) background; (3) the extent that the effect of cultural capital is mediated by subsequent influences; and (4) the extent to which the impact of cultural capital can be attributed to reading behaviour or participation in cultural activities.

For the analysis of two achievement measures the first model comprises the measures of social background and socioeconomic background. The second model adds cultural capital since theory contends that the effects of socioeconomic background, and to some extent social background, on important sociological outcomes are mediated by cultural capital. The final model replaces the cultural capital measure with its two components, reading and cultural participation.

For the analysis of university entrance performance an additional model includes two proximal influences of student performance, achievement in literacy and numeracy, and school sector. These factors may mediate the effects of cultural capital. For the analysis of university participation a further model was analyzed

which includes university entrance performance, based on the hypothesis noted earlier that students with higher levels of cultural capital are more likely to participate at university net of their university entrance performance.

The models for occupational attainment and earnings follow a similar pattern. The first comprises age, gender and the measures of socioeconomic background. The second adds cultural capital, the third achievement, the fourth qualifications, the fifth employment experience and the sixth splits cultural capital into reading and cultural participation. These analyses do not include language background, location or school sector.

The categorical social background variables were entered into the regression equations as 'dummy' variables so their effects represent the difference on the outcome variable for belonging to category and the contrast group. For these analyses the measures of the continuous *predictor* variables – cultural capital, reading, cultural participation, parental occupational status, parental education, household wealth, achievement and ENTER scores – were standardized to a mean of 0 and a standard deviation of 1. For the measures of qualifications the effects represent the difference in occupation status or earnings for those with the qualification compared to those without. The measures of qualifications are not mutually exclusive; it is possible to have more than one qualification. For employment experience the time spent in employment each calendar year was centered at the mean percentage of the time worked for the entire cohort. The result was divided by 10 so a unit change represents a difference of 10% in time spent working.

In the linear regression analyses of the two achievement measures, tertiary entrance performance and occupational status the effects should be interpreted as the effect on the dependent variable for a one-unit change in the predictor variable. For the analysis of university participation, the effects presented in Table 7.6 are logistic regression coefficients. In the discussion the effects are interpreted as odds ratios, which are the exponents of the coefficients. In the analysis of earnings the coefficients should be interpreted as the percentage change earnings for a one unit change in the predictor variable. All analyses were conducted on weighted data.

'Mixed' regression models for repeated data were used to analyze occupational status and earnings. As noted earlier, the hierarchical data set analyzed has two levels, person-years at the lowest level and persons (respondents) at the second level. There are several advantages to this approach. First, by combining the data for several years, fluctuations due to sampling and measurement error are minimised. Second, the effect of missing data is reduced by estimating repeated rather than the main effects for each year (Littell, Milliken, Stroup, & Wolfinger, 1996: 115–134). Of course respondents without any valid data on occupation or earnings are not included in the respective analyses. However, valid observations are included even when the data are missing for the same individual in other years. Third, the repeated measures model specification provides more reliable estimates of population parameters and the associated statistical tests (Littell et al., 1996). The analysis of only complete case data from longitudinal studies is very likely to produce biased estimates and is inefficient (Little & Rubin, 2002).

In the tables, statistical significance is indicated in a standard manner. The explanatory power of the models in Tables 7.4–7.9 is indicated by the adjusted and

pseudo R squared values. For all the models in Tables 7.8 and 7.9 the Bayesian information criterion (BIC) statistic is presented as a measure of goodness of fit.[2] A lower BIC indicates a better fitting model.

7.3 Results

Table 7.4 presents the effects of cultural capital and other factors on student performance in reading literacy. Model 1 shows that only 10% of the variation in students' literacy scores can be accounted for by the measures included. Model 1 shows that males and students from non-English speaking backgrounds have lower scores than the respective comparison groups (females and students from English-speaking backgrounds). There are no significant effects for the location variables. The coefficients for the socioeconomic factors show moderate effects. For example, a one standard deviation increase parents' education (which has the strongest effect of the three measures) is associated with an increase of 0.56 marks on a 0–20 mark test.

The addition of cultural capital in Model 2 only moderately reduces the effects of the socioeconomic and social background variables. The largest change is for gender. The effects for parents' education, parents' occupation and wealth, decline by between 10% and 20%. This suggests that cultural capital, as measured here, plays only a minor role in mediating the effects of social background. Cultural capital has an effect on literacy score independent of socioeconomic and social background. A difference of one standard deviation on the measure of cultural

Table 7.4 Effects of cultural capital and other influences on achievement in reading literacy

Unstandardized regression coefficients			
Parameter	Model 1	Model 2	Model 3
Intercept	14.41***	14.24***	14.22***
Male	−0.65***	−0.37*	−0.26*
Not English speaking	−1.89***	−1.86***	−2.02***
Regional	−0.29†	−0.23	−0.25
Rural	−0.20	−0.13	−0.15
Parents' education	0.56***	0.46***	0.46***
Parent's occupation	0.37***	0.33***	0.33***
Wealth	0.21***	0.17**	0.22***
Cultural capital		0.55***	
Cultural participation			0.06
Reading			0.73***
Adjusted R^2	0.10	0.12	0.14

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

[2] The formula for BIC = −2l + dlog(n)
Where l is the likelihood ratio for the model; d is the dimensions of the analysis, and n is the number of cases (see Schwarz, 1978).

capital is associated with an increase of 0.55 of a mark. The amount of variance explained increases marginally to 12%. In this model the impact of cultural capital is stronger than that of each socioeconomic background factor. At this point it could be concluded that cultural capital has an impressive, albeit moderate, effect on literacy, stronger than that of parents' education or occupation, or household wealth. However, disaggregation of the measure into its two components (Model 3) shows that reading behavior is the important component, not participation in elite culture. The effect for reading behaviour is relatively large at 0.73 marks whereas the effect of cultural participation is not statistically significant.

The importance of reading on students' performance in a test of reading literacy is not unexpected. Students who read a lot should perform better in reading tests. In contrast, the specific skills developed and reiterated by frequent reading are unlikely to impact on performance in numeracy tests. However, table 7.5 shows that the effect of cultural capital on numeracy is only slightly weaker than that for literacy. In Model 2 its effect on numeracy is 0.46 compared to 0.55 for literacy. Its role of mediating the effects of socioeconomic background is slightly smaller than that found for literacy: the magnitudes of the coefficients declining by between 8% and 16%. Of the three effects for socioeconomic background, cultural capital produces the largest decline for the effect for parents' education. Net of the socioeconomic background factors (in Model 2) its effect is stronger than both parents' occupation and household wealth and comparable with that of parents' education. So its effect is not trivial.

Analysis of the two components of cultural capital (Model 3) shows that participation in elite culture has a weak, but statistically significant, impact on numeracy score. The impact of reading is twice as strong. Participation in elite culture or reading more books, while not having a direct impact on numeracy, might be proxies for other factors more directly associated with numeracy. Alternatively, reading involves the development of general skills which are beneficial to numeracy as well as to literacy.

Table 7.5 Effects of cultural capital and other influences on achievement in numeracy

	Unstandardized regression coefficients		
Parameter	Model 1	Model 2	Model 3
Intercept	12.63***	12.48***	12.47***
Male	0.81***	1.05***	1.10***
Not English speaking	–0.63**	–0.62**	–0.68**
Regional	–0.07	–0.03	–0.03
Rural	–0.33†	–0.27	–0.27
Parents' education	0.58***	0.50***	0.50***
Parent's occupation	0.37***	0.34***	0.34***
Wealth	0.24***	0.21***	0.23***
Cultural capital	–	0.46***	–
Cultural participation	–	–	0.19***
Reading	–	–	0.42***
Adjusted R^2	0.09	0.11	0.11

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 7.6 Effects of cultural capital and other influences on tertiary entrance performance

	Unstandardized regression coefficients				
Parameter	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	73.95***	72.94***	69.36***	67.51***	67.38***
Male	−3.32***	−2.12*	−3.49***	−3.56***	−3.45***
Not English speaking	0.94	1.13	5.97***	6.00***	5.43***
Regional	−1.95†	−1.69	−1.49	−1.21	−1.34
Rural	−1.47	−1.24	−1.76	−1.13	−1.28
Parents' education	3.44***	3.03***	1.73***	1.57***	1.60***
Parent's occupation	2.60***	2.47***	1.89***	1.64***	1.66***
Wealth	1.05*	0.87*	0.43	0.03	0.17
Cultural capital	–	2.44***	1.69***	1.51***	–
Cultural participation	–	–	–	–	0.27
Reading	–	–	–	–	2.02***
Achievement	–	–	9.95***	9.98***	9.87***
Catholic school	–	–		4.75***	4.90***
Independent school		–		4.43***	4.57***
Adjusted R^2	0.10	0.11	0.29	0.31	0.31

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Analyses of students' tertiary entrance performance show a similar pattern as that found for literacy (Table 7.6). Model 1 shows only moderate effects for the measures of socioeconomic background. Parents' education has the strongest impact of 3.44 ENTER score points for a one standard deviation difference. Together social and socioeconomic factors account for only 10% the variation in students' tertiary entrance performance.

The addition of cultural capital produced declines of around 10% and 20% in the effects of the socioeconomic background factors. Thus it plays a minor role in mediating the effects of socioeconomic background on tertiary entrance performance. Net of socioeconomic and background factors, a one standard deviation difference in cultural capital is associated with a difference of about 2.47 ENTER score points. This difference would increase to nearly ten score points when comparing students at each extreme of the measure. These effects are not particularly strong considering that ENTER scores range from 30 to 99.95 and the R-squared increases by only 1% with the addition of the cultural capital measure. The coefficient for cultural capital is larger than that for household wealth but smaller than that for the other indicators of socioeconomic background.

A substantial proportion of the effect of cultural capital is mediated by achievement in literacy and numeracy. The coefficient declines by nearly one third, from 2.44 to 1.69 (Models 2 and 3). A much small proportion of its effect is mediated by attending a Catholic or independent school. The coefficient declines from 1.69 to 1.51 (Models 3 and 4). In Model 2 which comprises measures of socioeconomic and social background, and cultural capital, only 11% of the variation in tertiary entrance performance is accounted for. The addition of the achievement measure substantially increases the explained variance to nearly 30%. Its effect is a very large 10 ENTER score points for a unit change of one standard deviation. The

importance of achievement on tertiary entrance performance is quite remarkable since the achievement measure comprises 40, usually fairly simple questions from two short tests that have no bearing on the students' educational careers.

Disaggregating the measure of cultural capital reveals that reading behaviour significantly influences tertiary entrance performance, not participation in elite culture (Model 5). The coefficient for cultural participation is small and not statistically significant. Therefore, familiarity with elite culture brings no benefit to the most important educational outcome for young people in Australia. A one standard difference in reading behavior is, however, associated with a difference of 2.02 ENTER score points even when taking into account prior achievement in literacy and numeracy. Therefore, prolific readers have higher ENTER scores, net of prior achievement, school type and socioeconomic and social background.

For university participation, the familiar pattern is found (Table 7.7). Socioeconomic and social background factors have little explanatory power in university participation accounting for only 11% of the variation (Model 1). Their effects are not strong; a one standard deviation increase in parents' education (the strongest predictor of the three socioeconomic measures) increases the odds of university participation 1.5 times. The small declines in their effects of socioeconomic background factors with the addition of cultural capital in Model 2 shows that cultural capital does not largely mediate their effects.

Net of socioeconomic and social background factors, a one standard deviation increase in cultural capital increases the odds of attending university 1.4 times (Model 2). Its effect is larger than that for wealth, comparable to that for parents' occupation, but weaker than that for parents' education.

Table 7.7 Effects of cultural capital and other influences on university participation

	Logistic regression coefficients					
Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	–0.38***	–0.49***	–0.72***	–0.91***	–0.94***	0.09
Male	–0.52***	–0.35***	–0.50***	–0.49***	–0.45***	–0.21*
Not English speaking	1.01***	1.04***	1.57***	1.57***	1.48***	1.01***
Regional	–0.07	–0.03	–0.01	0.03	0.02	0.16
Rural	–0.18†	–0.14	–0.12	–0.06	–0.08	0.26†
Parents' education	0.43***	0.38***	0.29***	0.28***	0.28***	0.20***
Parents' occupation	0.29***	0.27***	0.21***	0.19***	0.19***	0.01
Wealth	0.22***	0.20***	0.14***	0.10*	0.14**	0.16**
Cultural capital	–	0.31***	0.23***	0.21***	–	–
Cultural participation	–	–	–	–	–0.01	–0.03
Reading	–	–	–	–	0.36***	0.14*
Achievement	–	–	0.94***	0.95***	0.92***	0.07
Catholic school	–	–	–	0.57***	0.60***	0.12
Independent school	–	–	–	0.38**	0.39**	0.00
Tertiary entrance score	–	–	–	–		1.37***
Pseudo R^2	0.11	0.13	0.21	0.22	0.23	0.29

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In Model 3, its effect declines by almost one-third when achievement is added indicating that some its effect is mediated through achievement. The coefficient declines only marginally with the addition of school type in Model 4. The addition of achievement doubles the explanatory power of the model so is an important influence.

Disaggregation of the cultural capital measure shows a statistically significant effect for reading but not for cultural participation (Model 5). Its effect survives controls for ENTER score. Interestingly, the effects for parents' education and wealth remain significant in Model 6 indicating that socioeconomic factors still contribute to university entrance even when taking account school type and tertiary entrance performance.

Table 7.8 presents the effects of cultural capital and other factors on occupational attainment. Model 1 shows only weak effects for the socioeconomic background variables on occupational status. For example, the coefficient for wealth indicates that a one standard deviation increase in wealth is associated with an increase of 0.71 units in occupational status on a 0–100 point scale. In contrast to the effects of these socioeconomic background factors in the analyses on educational outcomes, the effects of wealth and parents' occupational status are stronger and than that for parents' education.

The addition of cultural capital (in Model 2) makes little impact on the effects of the socioeconomic background factors. The coefficient for cultural capital (0.37) is relatively large. Net of achievement (Model 3) the direct effect of cultural capital

Table 7.8 Effects of cultural capital and other influences on occupational attainment

Regression coefficients from repeated design analyses						
Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	22.27***	22.18***	22.10***	21.91***	21.72***	21.71***
Age	2.11***	2.10***	2.11***	1.58***	1.62***	1.62***
Male	−1.88***	−1.67***	−1.72***	−1.41***	−1.37***	−1.33***
Parents' education	0.42***	0.35**	0.25*	0.15	0.17	0.17
Parents' occupation	0.71***	0.69***	0.61***	0.58***	0.58***	0.58***
Wealth	0.69***	0.67***	0.63***	0.58***	0.57***	0.58***
Cultural capital	–	0.37***	0.26*	0.22†	0.23*	–
Cultural participation	–	–		–	–	0.14
Reading	–	–		–	–	0.19
Achievement	–	–	0.77***	0.60***	0.60***	0.58***
Apprenticeship	–	–	–	–0.98†	–1.15*	–1.12*
Traineeship	–	–	–	–0.29	–0.44	–0.43
TAFE certificate	–	–	–	–0.11	–0.16	–0.17
TAFE diploma	–	–	–	1.64**	1.63**	1.62**
University diploma	–	–	–	7.97***	7.91***	7.91***
University degree	–	–	–	14.03***	14.01***	14.00***
Post-graduate degree	–	–	–	4.56†	4.52†	4.50†
Other qualification	–	–	–	0.70	0.69	0.69
% time working	–	–	–		0.11***	0.11***
BIC statistic	243,253	242,522	242,052	240,710	240,703	240,433

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

declines suggesting that the impact of cultural capital on occupational status is partially mediated through achievement.

The effect of cultural capital declines further with the addition of qualifications and moves out of conventional levels (p0.05) of statistical significance (Model 4). This shows the effect of cultural capital is also mediated through educational qualifications. The addition of employment experience in Model 5 had little impact on the already weak effect of cultural capital. After disaggregation, neither component of cultural capital has a statistically significant effect (Model 6).

Turning to Table 7.9, the relationship between cultural capital and weekly earnings is negative. Net of socioeconomic background factors, a one standard deviation increase in cultural capital reduces earnings by 5%. Comparing those at each extreme of the measure the effect is a considerable 20%. This result is contrary to the expectations of cultural capital theory. One explanation for the negative effect is that young people with high levels of cultural capital move into less well renumerated occupations, such as the 'arts' and associated occupations. An alternative explanation is that the economic benefits of cultural capital are apparent only when the cohort is substantially older.

The negative effects of cultural capital are only partially mediated by achievement; the effect declines from −5.0 to −4.5. Comparison of Models 3 and 4 show that its effects on earnings are not mediated by qualifications since the effect is much the same. Experience of employment explains much of the negative effect

Table 7.9 Effects of cultural capital and other influences on earnings

	Percentage effects from repeated design analyses					
Parameter	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	19.1***	19.2***	19.1***	15.0***	13.8***	13.8***
Male	21.3***	18.6***	18.9***	21.3***	21.6***	21.5***
Parents' education	−4.5***	−3.8***	−3.3***	−4.0***	−0.8	−0.8
Parents' occupation	−2.4*	−1.9*	−1.5	−2.0*	−1.1	−1.1
Wealth	−0.4	−0.1	0.3	0.2	−1.1	−1.2
Cultural capital		−5.0***	−4.5***	−4.4***	−1.8*	–
Cultural participation	–	–	–	–	–	−1.0
Reading	–	–	–	–	–	−1.4
Achievement			−3.9***	−5.4***	−2.3*	−2.3***
Apprenticeship	–	–	–	28.9***	12.1***	12.0***
Traineeship	–	–	–	22.1***	9.0***	8.9***
TAFE certificate	–	–	–	5.8*	4.5*	4.5
TAFE diploma	–	–	–	10.4***	14.3***	14.2***
University diploma	–	–	–	9.9	5.4	5.4
University degree	–	–	–	40.6***	46.6***	46.6***
Post-graduate degree	–	–	–	16.6	13.0	13.1
Other qualification	–	–	–	15.9***	9.5**	9.5***
% Time working	–	–	–		10.4***	10.4***
BIC statistic	28,536	28,427	28,371	27,854	26,809	26,784

† $p < 0.10$, *$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

of cultural capital since the coefficient declines from −4.4 to −1.8. This suggests that young people with high levels of cultural capital have spent less time working which largely accounts for their lower earnings. However, disaggregation into reading and cultural practices weakens the effects so neither component is statistically significant.

7.4 Conclusions and Discussion

This chapter has investigated the influence of cultural capital, as conventionally measured in quantitative studies, on a range of educational and labour market outcomes. For educational outcomes, the study shows that students' participation in cultural activities is not associated with these outcomes among young people in Australia. In contrast, reading behaviour has an impressive effect on educational outcomes even taking into account other influences. For the labour market outcomes, occupational attainment and earnings, neither component of cultural capital has an impact when controlling for the major influences of qualifications and employment experience. Young people with high levels of cultural capital in their mid-teens tend to be working in occupations with lower pay which can substantially be attributed to less employment experience.

Cultural capital theory argues that cultural capital is the mechanism by which socioeconomic inequality is reproduced across generations. Children from privileged social backgrounds subconsciously acquire cultural capital. However, this study shows that little of the impact of socioeconomic and social background on educational outcomes is mediated by cultural capital. Its impact, which can largely be attributed to reading, is for the most part independent of social background. If this finding was replicated in a variety of contexts then a major component of cultural capital theory would be rejected.

This study shows the importance of reading for both achievement and tertiary entrance performance. Reading behaviour does not have a rich theoretical pedigree like that of cultural capital. The strong effects for reading behaviour on reading literacy are simple to explain: reading develops skills in word knowledge, the retrieval of information from text, and the analysis of interpretation of textual material. However, this does not explain why reading is also important for numeracy or tertiary entrance performance, which for a large proportion of students is based on performance in higher mathematics and science. One likely explanation is that frequent reading promotes meta-skills such as memory, retrieval of information, comprehension and piecing together of information. These skills are more important for educational and labour market success in contemporary societies than familiarity with 'elite' culture.

Chapter 8
Teenage Time Use as Investment in Cultural Capital

Karen Robson

Abstract In this chapter, cultural capital is examined in a wider context alongside its relationship with the other capitals defined by Bourdieu. While cultural capital is theoretically convertible into other forms of capital, the overwhelming majority of previous research focuses on its relationship with childhood school achievement. I suggest that the more attention be given to the relationship that cultural capital has with economic and social capital and the causal mechanisms by which it is thought to act. Next, I propose a measure in which the metaphor of investment implied in the term "capital" is recognised. The availability of time diaries from the British Cohort Study of 1970 provides an invaluable source of information regarding how British youth spent their leisure at age 16. Empirical analysie examine the effect of teenage cultural capital investment on economic capital and social capital outcomes in adulthood. The chapter ends with a discussion of the results, addressing some fundamental shortcomings in previous cultural capital research which have been identified by previous researchers and which this study has attempted to either address or improve upon.

8.1 Introduction

If we consider economic capital, social capital, and cultural capital to be the three main "capitals" that have been of interest to sociologists in the past decade or so, it is the latter of these that has received the least attention, although interest in this area is certainly growing rapidly, particularly in education research. Cultural capital is associated mainly with the writings of Pierre Bourdieu, although concept has been examined by a fair number of social scientists in recent years. The main relationship that is examined is the role of cultural capital as a subtle mechanism by which class inequalities in educational outcomes are maintained, which Bourdieu (1977) first drew attention to in his earlier writings.

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This chapter begins by briefly examining cultural capital in a wider context alongside its relationship with the other capitals defined by Bourdieu (1986). While cultural capital is theoretically convertible into other forms of capital, the overwhelming majority of previous research focuses on its relationship with childhood school achievement. I suggest that more attention be given to the relationship that cultural capital has with economic and social capital and the causal mechanisms through which it is theorized to act. Next, I propose a measure of cultural capital in which the metaphor of investment implied in the term "capital" is recognised. The availability of time diaries from the British Cohort Study of 1970 provides an invaluable source of information regarding how British youth spent their leisure at age 16. Through empirical analysis I examine the effect of cultural capital invested in during youth on economic capital and social capital outcomes in adulthood.

8.2 Definitional Issues

Defining cultural capital is no simple task. Bourdieu himself made the definition of this term very complex indeed by modifying the concept and its functions throughout his various writings. What follows is not a comprehensive review of the various definitions being used in the literature, but an overview of the subtle differences that exist in the core components of the definitions used by authors. For example, Aschaffenburg and Maas (1997) identify the key features of cultural capital as being skill and familiarity with cultural codes and practices of the dominant class. Dumais (2002), however, indicates that cultural capital consists of "linguistic and cultural competence", as well as a comprehensive knowledge of the culture of the upper classes. Sullivan (2001) also asserts that cultural capital is comprised of familiarity with the dominant culture in a society and emphasizes that the ability to use "educated language" is a key feature. Kalmijn and Kraaykamp (1996) stress that cultural capital involves socialisation into highbrow cultural activities, which includes being socialised into the tastes and preferences of highbrow culture. Mohr and DiMaggio (1995) define the concept as the highbrow tastes, objects, or styles legitimised by the dominant culture which "maintain and disseminate societal standards of value and serve collectively to clarify and periodically revise the cultural currency" (p. 168). While fundamentally similar, all of these definitions stress different aspects of the concept.

Lamont and Lareau (1988) famously documented Bourdieu's changing definition of the concept throughout his writings. In particular, they note the wide range of functions performed by cultural capital, stating that according to Bourdieu "cultural capital is alternatively an informal academic standard, a class attribute, a basis for social selection, and a resource for power which is salient as an indicator/basis of class position" (p. 156). Several authors have opted for the definition proposed by Lamont and Lareau as it captures the crux of his most compelling arguments. The end product of their semantic analysis was a definition that they assert captures the overarching common elements that were present in the

definitions presented by Bourdieu and his co-authors over time. They proposed to define cultural capital as

> institutionalized, i.e. widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion, the former referring to exclusion from jobs and resources, and the latter, to exclusion from high status groups (Lamont & Lareau, 1988: 156).

Lamont and Lareau (1988) argue that the signals are sent unconsciously because they are learned through socialisation and incorporated into the habitus. They add that it is important to engage the metaphor of "capital" implied in the concept. Cultural capital is something that is *invested in and accumulates over time*. It should also be noted that in order to be cultural capital, according to Bourdieu, consumption of cultural activities cannot simply be unreflective for reasons of pure enjoyment. Peterson and Kern (1996) highlight Bourdieu's argument that true cultural capital is inextricably linked to intellectualised appreciation.

8.3 The Causal Mechanism

How is it then, that cultural capital has an effect on life outcomes? Bourdieu argued that cultural capital is not simply a byproduct of class position, but that it is subtly deployed and is an underlying reason for the reproduction of social inequalities. Understanding of highbrow culture and participation in such activities gives individuals certain types of knowledge that gives rise to behaviours manifested in the habitus which then send signals to others about the likely socioeconomic background of the individual. According to Bourdieu, this is how inequality is subtly perpetuated in the education system.

Cultural capital therefore, does not operate in isolation, but through a complex web of socialization into behaviours over the life course that are rewarded by gatekeepers. In addition to cultural capital, Bourdieu (1986) identified (at least) two other broad types of capital that exist in an interrelated web along with cultural capital as well as with one another. The first is economic capital, which refers to that which is quickly and relatively easily converted into money. This type of capital is plainly the most straightforward, and indeed closely related to the concept of human capital outlined by Becker (1964). Job skills, job tenure and educational attainment are included in this type of capital as their transformation into money is a well understood process. The second type of capital is social capital, which Bourdieu conceptualized as micro-based in networks and individual relationships that potentially lead to access to resources.

As is evident by the brief discussion of cultural capital so far, these forms of capital do not exist in isolation from one another, but are inextricably linked. Each form of capital is convertible into another form. Economic capital is at the root of all capitals such that economic reward can be derived from both social and cultural capital. The example of cultural capital has demonstrated that signals of cultural knowledge are rewarded in the classroom, which is easily converted into a type of economic capital – educational attainment.

8.4 Operationalization of Cultural Capital

There are three general techniques of measuring cultural capital in the literature that will be discussed here: assessing the activities/knowledge of the respondent, assessing the activities/knowledge of the respondent's parents, and finally, using elements of both. What follows is not an exhaustive review, but a discussion of some of the previous researchers' ways of quantifying this concept. The first technique typically involves asking young people about their participation in "high culture" types of activities. DiMaggio (1982), one of the first after Bourdieu to do research in this area, measured cultural capital by students' self-reports of art, literature, and music involvement, and their interests in these respective areas. These indicators were supplemented by measuring respondents' attitudes to specific artistic activities and occupations, as well as knowledge tests. Sullivan (2001), alternatively, surveyed pupils on their reading, television viewing, and music listening preferences, as well as their knowledge of well known cultural figures. Because Bourdieu stressed the importance of linguistic competence in the concept of cultural capital, these measures were supplemented with vocabulary test scores. Alternatively, Dumais (2002) summed the number of high culture activities in which the respondent participated, but also supplemented the measurement with an operationalisation of Bourdieu's concept of "habitus" through the respondent's expectations of whether they would have a professional occupation by age 29.

Some researchers assess cultural capital of respondents solely by the retrospective activities of their parents. For example, Kalmijn and Kraaykamp (1996) measured cultural capital by whether parents attended various cultural events and encouraged the respondent to read books that were not school-related. De Graaf, De Graaf, and Kraaycamp (2000) measured parental cultural capital through the beaux arts participation and reading habits of parents, while De Graaf and De Graaf (2002) used a similar technique, augmented by cultural commodities in the respondent's household between the ages of 12 and 15.

A number of studies also measure the cultural capital of respondents' parents along with that of the child. Later work by DiMaggio and colleagues (Mohr & DiMaggio, 1995) operationalizes the concept by employing a scale that measured the number of cultural goods in the home, as well as the impact of parental participation in various types of organizations on their children's cultural capital. They also conceptualize father's occupation as a additional way of assessing parental cultural capital, as a similar technique was used by Bourdieu (1977b) when discussing the different leisure consumption habits of occupational groups. Aschaffenburg and Maas (1997) stress that parents' and children's cultural capital should be included in the same model and that any measure of cultural capital must capture the 'metaphor of accumulation and investment' implied by the term capital. Therefore, they measured individual cultural capital through attendance at various "cultural classes" at several ages during childhood, supplemented by the respondents' account of their parents' activities when they were growing up. Sullivan (2001) measured this concept by asking students about their parents'

reading, newspaper, and radio station preferences, as well as their participation in formal cultural activities and the types of topics that were discussed by parents within the home. This was supplemented by the respondents' knowledge of famous cultural figures, vocabulary testing, as well as obtaining information on the types of materials read, programs viewed on television, and music listened to by the respondent, along with whether or not he or she participated in "formal culture" such as art gallery or theatre attendance. Finally, Roscigno and Ainsworth-Darnell (1999) measured what they called "family cultural capital" which assessed the types of cultural trips attended by the respondent and the types of cultural classes participated in, as well as the types of cultural resources available in the family home which ranged from receiving a daily newspaper to the presence of a computer in the home.

As is clear from this brief overview, there is no standard way of measuring the concept of cultural capital. Lamont and Lareau (1988) comment on the difficulty of operationalizing this concept, stressing that cultural activities and the validity of their worth in particular environments further complicates the ability of cultural capital to be adequately measured.

8.5 Objectives of the Current Study

The current study has three distinct and broad objectives. The first is to contribute to the literature on cultural capital by using a unique operationalisation of the concept. Time diaries collected from teenagers will be used to examine the time spent participating in cultural capital activities during a time frame in youth. This is a direct and literal way of measuring high culture participation and captures the investment metaphor implied in the term "capital."

The second objective is to model cultural capital alongside the other capitals discussed by Bourdieu. As discussed above, capitals are all transferable, to a greater or lesser degree, into one another. The analyses that follow will attempt to model the conversion of cultural capital into economic capital and social capital. The vast majority of cultural capital analyses focus on educational outcomes, very much in a similar vein as Bourdieu (1977). Other forms of analysis, however, are clearly possible given the discussion of the conversion possibilities of cultural capital outlined by Bourdieu (1984a, 1986).

The third objective is to use a unique data set in the analyses. Up until now, with few exceptions (some included in this volume) examination of the effects of cultural capital socialisation in youth have focused almost entirely on retrospective data collected in adulthood, or else have examined the classroom achievement of respondents who were still children. The data used here are from a British birth cohort from which data were collected at several points in their lives. Reports of cultural capital participation during youth were collected during youth, from the respondents, during a 4 day period in which they kept activity diaries. There is no more exact or literal way of measuring cultural capital investment than this.

As well, the outcomes examined here – economic and social capital – are characteristics obtained from the respondents in adulthood at an additional data collection attempt. These data are truly unique in the sense that they allow for such a direct assessment of cultural capital participation in youth and an examination of outcomes several years later.

8.6 Data and Methods

The data used in the analyses were from the 1970 British Cohort Study (BCS70). All persons born in Great Britain between 5 and 11 April 1970 were subjects for the study, with data collected on 17,196 births and the families of the babies in England, Scotland, Wales, and Northern Ireland. Attempts to collect data from the full cohort occurred at ages 5, 10, 16, 26, and 29. While the focus of the inquiry at birth was largely medical, the scope of latter data collection efforts broadened significantly. At the post-birth sweeps, considerable data was collected on the educational and physical development of the children. In adulthood, cohort members were asked also about topics pertaining to their economic development, living arrangements, and offspring.

This research has taken advantage of the longitudinal nature of the data and considers in the analyses characteristics of the cohort members (hereafter CMs) collected at ages 16 and 29. At age 16, CMs were given 4-day leisure and activity diaries to complete over a Friday to Monday time frame, in which they were asked to record all of their activities. It is from these data that various forms of leisure consumption can be observed at youth and related to outcome measures in adulthood.

Like most longitudinal studies, particularly those which span decades, attrition is a potential problem that must be addressed. While the original birth cohort was 17,196, data from 11,622 members was collected at age 16. The age 16 sweep, however, consisted of some 14 different survey instruments, some of which were to be completed by the student, others by teachers, and others by parents. A teacher's strike during this time also complicated the distribution of questionnaires to students. Therefore, while 11,622 cases have data on at least one survey document, considerable loss of cases occurs when data from different survey instruments are combined. The leisure and activity diaries were distributed to 8,526 cohort members and 7,077 contributed at least 1 useful diary day. Analysis of the diary returns (Jones, 1990) indicates that girls were better diarists with 63% sending back good 4-day diaries and 8% contributing 1–3 good days. The comparable figures among boys were 45% and 10%. Returns also varied by region such that Londoners were particularly bad diarists and East Anglians and Scots particularly good.

As mentioned above, the diaries were just one survey instrument of many administered at 16. Family background characteristics were also obtained in the parental questionnaire at age 16, however, combining both instruments results in a substantial loss of cases. Because family background information is an important factor for which to control in such analyses, where family background information

was missing at age 16, information at age 10 was substituted, and where this was still missing, information at age 5 was substituted.

The outcomes examined here are from data collected at 29. At this attempt, full survey information was collected from 11,116 cohort members. Therefore, the analysis is limited to those who completed the time diaries at age 16 and were present in the latest data collection attempt. Depending on the outcome variable examined, this yields a final sample of approximately 5,000 cases. A longitudinal weight was created that weighted for region at birth, parental social class, mother's age at birth, and child's sex. All multivariate analyses shown use the longitudinal weight although the differences between the unweighted and weighted estimations are negligible.

8.6.1 Variables

Economic capital. The economic capital of both the CM and his or her family of original was measured by estimating their hourly earnings potential based on education, sex, work experience, job type, hours worked and interactions between several of these variables. The rationale, details, and theoretical underpinnings of this technique are described in detail in Gershuny (2000, 2002a, b, c). This measure is highly correlated with standard class measures, such as the EGP but permit the metaphor of 'capital' to be a stronger part of the operationalization as it captures individual investments that are associated with earnings potential. Highest educational attainment was measured at age 29. Those who had an undergraduate degree or higher were coded one.

Cultural capital. Activities from the 4 day time diaries at age 16 were coded into 109 main activities, along with duration, and with whom the activity was done (where relevant). Using the definition of cultural capital employed here, the following activities were considered those that fell within the definition of "high culture leisure consumption": (1) taking an evening class, (2) going to museums, zoos, or exhibitions, (3) going to a library, (4) going to the theatre, (5) going to a concert or opera,[1] (6) reading books, (7) participating in artistic or music-related activities[2] and (8) writing. It should be noted that studying and doing homework were coded separately from reading and writing and therefore reading and writing here are considered leisure activities, and not directly related to schoolwork. While duration of activities was recorded, there was considerable missing data on duration for all activities. As well, the large proportion of cohort members that didn't participate in these activities made the vast majority of durations "zero" and substantially skewed the distribution of these variables. It is not so much the duration of the activity as whether or not the cohort member participated in any of them that was of interest in this study, and therefore dummy variables for the above eight activities were

[1] Pop concerts were coded separately.

[2] Listening to music in the form of records or tapes was coded separated.

created, with one indicating that the cohort member had participated in this activity at least once in the diary that was returned.[3]

Social capital. While social capital is generally conceptualized as access to networks and the resources available to network members, no such measures were available in the age 29 or age 26 data. Instead, a variable that measured leisure activities of cohort members that may lead to network membership and related access to resources was used. At age 29, the CM was asked whether he or she was a member of a voluntary organization, which ranged from political party membership to women's groups and residents' associations. The code 1 was assigned if he or she had belonged to at least one group.

8.7 Results

Table 8.1 displays the numbers of males and females participating in cultural capital activities at age 16. The most popular activity for males and females was reading books for pleasure, although over double the number of females participated in this activity compared to males. The next most reported cultural capital activity was participating in an artistic or music-related activity, followed by writing. Very few cohort members attended night courses, concerts, or theatre during the reference period. An equal number of males and females reported going to a museum, zoo, or exhibition, while over double the number of females reported going to a library compared to their males counterparts.

Table 8.2 reports the total number of *different* cultural activities engaged in by sex. It should be noted that multiple occurrences of participation in any one cultural activity are not considered here – it is whether or not any of the cultural activities are engaged in that is the focus of analysis. A vast majority of diarists engaged in no cultural activities during the diary period – almost 62%, which comprised

Table 8.1 Numbers of males and females participating in cultural capital leisure activities (unweighted)

	Males	Females
Art/music	228	313
Night course	21	52
Attend concert	23	46
Attend theatre	18	19
Reading books	458	930
Go to museum	55	55
Go to library	58	126
Writing	165	410

[3] This technique also allows for the greatest number of cases to be retained as it does not distinguish between diarists who completed the entire 4 days and those who only returned partial diaries. All those who returned at least one usable day were included.

Table 8.2 Total cultural activities by sex (unweighted)

Total cultural activities	Male	Female	Total
0.	1,759	1,807	3,566
	68.76%	56.31%	61.83
1.	609	972	1,581
	23.81%	30.29%	27.41
2.	155	330	485
	6.06%	10.28%	8.41
3.	33	83	116
	1.29%	2.59%	2.01
4.	2	15	17
	0.08%	0.47%	0.29
5.	0	2	2
	0.00%	0.06%	0.03
Total	2,558	3,209	5,767
	100.00	100.00	100.00

almost 70% of males and 56% of female diarists. Almost 24% of males engaged in one cultural activity, compared to 30% of females. Two different cultural activities were reported by 6% of males and 10% of females. Participation in three different activities was rare with just over 1% of males and 2.5% of females reporting three different activities and only very small numbers of diarists reporting four or more different cultural activities.

Cultural capital participation will, to some extent, necessarily be related to the resources of the family of origin. T-tests (not shown) indicated that mean family economic capital for the cohort members in the highest quintile (7.161) of leisure consumption was significantly different from the mean for the lowest quintile (6.419) of high culture leisure consumption. It should be noted that the zero order correlation between total number of cultural activities engaged in and family of origin economic capital was 0.12. Additionally, the correlation between family of origin economic capital and cohort member economic capital was 0.15. These results, albeit statistically unsophisticated, suggest that although there is a mean difference between the family resources of cohort members and participation of cultural activities at age 16, the correlations between the variables are surprisingly small, suggesting that there is more going on than a simple transfer of family background to offspring.

Table 8.3 presents the results of the OLS regression of economic capital at age 29 on cultural capital leisure activities at age 16 and the controls of sex and family of origin economic capital. The first estimation introduces just the controls, while the second adds the leisure activities considered here. Sex and family of origin were statistically significant for both estimations, indicating that sex and family background influenced the economic capital of cohort members at age 29. Four of the eight cultural leisure activities considered here had a statistically significant and positive effect on economic capital at age 29, independent of the effects of the control variables: participation in artistic or music-related leisure (b = 0.633), having attended theatre (b = 1.111), reading for pleasure (b = 0.552), and writing for leisure (b = 0.471). Participation in these events at age 16 was associated

Table 8.3 OLS regression of economic capital in adulthood on leisure activity at 16 and controls (N = 4,845)

	Unstandardised coefficients	
	(1)	(2)
Female	−0.341**	−0.4478**
Family of origin EC	0.226**	0.198**
Art/music	–	0.633**
Night course	–	0.490
Attended concert	–	−0.139
Attended theatre	–	1.111**
Read for pleasure	–	0.552**
Went to museum	–	−0.118
Went to library	–	0.171
Writing	–	0.471**
Constant	5.846**	5.804**
R-squared	0.031	0.051

*$p < 0.05$, **$p < 0.01$.

Table 8.4 Logistic regressions of CM adult outcomes on leisure activities at 16 and controls (N=4,523)

	Odds ratios			
	Got first degree		Voluntary organization membership	
Female	0.864*	0.714**	1.602**	1.453**
Economic capital family of origin	1.277**	1.244**	1.051**	1.037
Economic capital	–	–	1.115**	1.091**
Art/music	–	2.160**	–	1.677**
Night course	–	1.734*	–	0.713
Attended concert	–	1.296	–	0.881
Attended theatre	–	2.017	–	1.517
Read for pleasure	–	2.474**	–	1.626**
Went to museum	–	1.180	–	1.879*
Went to library	–	1.486*	–	1.311
Writing	–	1.799**	–	1.169
Pseudo R-squared	0.035	0.086	0.019	0.035
Log likelihood	−2643.45	−2504.045	−2110.187	−2075.812

*$p<0.05$, **$p<0.01$.

with an increase in economic capital in adulthood. While sex and family of origin economic capital explained three percent of the variance in adult economic capital, the addition of the cultural capital leisure activity variables increased the explained variance to 5%.

Table 8.4 presents the results of the logistic regression of adult later-life economic and social capital on leisure activities at 16 and controls. In each estimation, the first model includes control variables only, while the second adds the leisure activities considered here. The first outcome examined was whether or not the CM had an undergraduate degree. With just controls, family of origin economic capital

was a statistically significant predictor of having a higher degree. Every one unit increase in family of origin's economic capital increased the odds of having a higher degree by 27%. When the leisure activities were added, the family of origin economic capital remained statistically significant and the sex variable became a significant predictor such that females were less likely to have a higher degree compared to males, independent of the effects of the other variables.

The final outcome considered was whether a CM belonged to a voluntary organization. The control variables were all significant predictors of civic engagement, with females having almost twice the odds of belonging to a voluntary organization, and economic capital of both the cohort member and family of origin increasing the odds of belonging to a voluntary organization. Inclusion of the cultural capital leisure variables in the second estimation resulted in family of origin economic capital losing statistical significance, while participation in artistic and music-related leisure, reading for pleasure, and museum attendance at age 16 all increased the odds of being involved in a voluntary organization at 29.

8.8 Discussion and Conclusion

The findings presented here suggest that there is a relationship between cultural capital investment in youth and adult social and economic capital outcomes. The first relationship that was tested was between cultural capital investment in youth and economic capital in adulthood. Because children from privileged backgrounds are more likely to have exposure to "high culture" socialization, family's economic capital was considered an important characteristic for which to control. Even controlling for the effects of family of origin economic capital, however, there was still a positive relationship between art and music-related leisure, attending theatre, reading for pleasure, and leisure writing at age 16 and economic capital at age 29. In other words, some of the cohort member's economic capital in adulthood could be explained by the economic capital of their parents, but not all. The statistical significance of some of the cultural capital variables suggests that leisure consumption in youth was converted into economic capital in adulthood. While educational attainment is a component of the economic capital measure employed here, a separate analysis of the effects of cultural capital on having a first degree at 29 were carried out as much of the previous research on cultural capital has been concerned with educational attainment. Even accounting for the effects of economic capital of the family of origin, art and music-related leisure, having attending a night course, reading for pleasure, visiting a library and leisure writing at age 16 all increased the odds of having a university degree at 29. Arguably, attending a night course, reading and writing for pleasure, and going to the library are all indicators of "bookish" behaviour and a predisposition to academic pursuits, however the presence of art and music-related leisure among these significant predictors suggested that there is more to this relationship than a simple predisposition to academic achievement.

The next relationship that was tested was the transferability of cultural capital investments at age 16 on social capital in adulthood. Social capital was measured

by participation in voluntary organizations. Economic capital in adulthood again was found to be transferable into social capital, as measured by this form of civic engagement. Art and music-related leisure, reading for pleasure and visiting a museum during the reference period at age 16 increased the odds of civic engagement, also supporting the notion that cultural investments are transferable into social capital.

Leisure reading and writing were consistently statistically significant "cultural capital" indicators, suggesting that what was really being assessed is the scholastic ability and endeavours of the cohort members. Indeed, other authors, including those included in this volume have also found a strong association between reading behaviour and later-life outcomes, particularly those that are related to academic achievement. In addition to the obvious association between literacy and later-life outcomes, it may also be the case that CMs with literary knowledge and writing competence (achieved through practice) are likely to "signal" to others (including teachers) a familiarity and ease with forms of highbrow culture. In addition to the consistent statistical significance of these two forms of cultural capital investment, art and music-related leisure was also consistently found to be a predictor of all the outcomes examined here. That reading, writing, and art and music-related leisure were consistently significant predictors also suggests that these findings are not biased due to extreme cases, as these three forms of leisure consumption were, of the activities considered here, the three most common engaged in by CMs.

Dumais (2002) and Lareau and Horvat (1999) have argued that in addition to cultural capital, the habitus of the individual must be considered. While cultural capital measures an investment in the form of resources, such a conceptualisation is incomplete without considering the orientation of individuals, particularly their ability to activate their capital. The habitus possesses not only the capital, but also the skills and abilities (or lack thereof) to activate or effectively convert the capitals. These factors – the skills and abilities to activate capital, are undoubtedly important in the wider understanding of how capitals are transferred into one another. The analyses presented here focus exclusively on 'capitals' and neglect the habitus, which other authors in this volume show is a complex concept to operationalize.

The research presented here has made use of a unique data set from which involvement in cultural leisure consumption could be examined, and the transferability of this cultural capital investment into other forms of capital could be observed from data collected in adulthood. Findings suggest that there is evidence that cultural activities participated in during youth (cultural capital) are transferable into economic capital in the form of earnings potentials and higher degree attainment, as well as social capital, as measured by civic engagement. Evidence was found for the fungibility of the capitals over the lifecourse. Future researchers interested in cultural capital may consider examining the conversion of capitals in addition to focusing on educational outcomes. As well, the metaphor of "capital" implies an investment that occurs over time, which should be recognized in any discussion of these concepts. Capitals are not static traits, but are accumulated and converted over the life course. The current availability of various longitudinal data sets allows for these dynamic changes to be examined in a similar manner as to how they are discussed in the theoretical literature.

Chapter 9
Cultural Capital and Access to Highly Selective Education: The Case of Admission to Oxford

Anna Zimdars, Alice Sullivan, and Anthony F. Heath

Abstract This chapter investigates whether cultural capital influences the chances of being offered a place for undergraduate study at the University of Oxford. We examine the extent to which measures of cultural capital, operationalised as both cultural involvement and cultural knowledge, mediate the effects of other social background characteristics. We find that cultural knowledge, rather than participation in the beaux arts per se, helps to predict the chance of getting a place at Oxford. Differences in cultural capital, however, cannot account for most of the differences in admissions rates by gender, ethnicity and class. The fact that we find a professional class advantage which cannot be explained by differences in cultural resources may be seen as running counter to Bourdieu's postulation of cultural capital as the main differentiator between fractions of the middle class.

9.1 Introduction

The British ruling elite has traditionally been dominated by graduates of the universities of Oxford and Cambridge (Marsh, Ellis, & Craven, 2002). In particular, the University of Oxford has been second to none as the gatekeeper to the British elite (Soares, 1999: 5). Most British Prime Ministers have passed through Oxford, and Oxford graduates continue to secure leading positions in public life, the judiciary and the media (Boyd, 1973).

Thus, in an era of rapid expansion of the higher education system, Oxford selectors for undergraduate admission have retained a role as gatekeepers to the national elite. For this reason, the Oxford admissions process is subject to a level of debate and public interest not applied to any other British university. Central to admissions

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controversies is the question of the extent to which admission is based on social class prejudice, and a corresponding bias against state school applicants. The questions of what counts as ability and merit, how we determine whether someone is 'able' or not, and what resources are needed to cultivate a particular ideal of ability, have been largely absent from this debate. Furthermore, the link between gender and ethnicity and admissions decisions has been almost entirely absent from the public debate.

The most prestigious and competitive universities have increasingly faced an oversupply of highly qualified school leavers for limited undergraduate places. It is no longer possible to use A-level grades alone to differentiate between these applicants, who have almost uniformly excellent results. Oxford attempts to distinguish between applicants with similar examination results, using interviews, as well as entrance tests in certain subjects. This entry process provides a promising testing ground for the role of cultural capital in elite admissions.

Bourdieu's theory of cultural reproduction seeks to explain the link between social class of origin and social class of destination in terms of the impact of cultural capital on educational attainment. Bourdieu's theory has been interpreted and operationalised in various ways. Some authors have used 'beaux arts' participation, such as attendance at galleries, museums and concerts as a measure of cultural capital (Katsillis & Rubinson, 1990; Lamb, 1989). However, reading behaviour and book ownership have generally been found to be better predictors of academic success (Graetz, 1988; De Graaf, 1988; Crook, 1997; De Graaf, De Graaf, & Kraaykamp, 2000; Sullivan, 2001). Other measures, such as TV viewing habits and topics of discussion with parents have also been used (Barone, 2006; Sullivan). In contrast, measures of cultural and linguistic knowledge or competence have only rarely been included in studies (DiMaggio, 1982; DiMaggio & Mohr, 1985; Mohr & DiMaggio, 1995; Sullivan).

Several authors have criticised an overly narrow interpretation of cultural capital as simply consisting of 'beaux arts' participation, and have suggested that cultural capital should be seen as including certain forms of skill and knowledge which are rewarded in the education system (Crook, 1997; De Graaf et al., 2000; Farkas, 2003; Ganzeboom, 1982; Lareau & Weininger, 2003; Sullivan, 2001). Thus, cultural capital cannot be readily distinguished from 'cognitive skill' or 'academic ability', but is part and parcel of these concepts. We have argued elsewhere (Sullivan, 2002, 2007) that cultural participation in itself is likely to be less important than the cultural and linguistic knowledge that it produces, and that certain forms of cultural participation (such as reading) are likely to be more productive than others (such as going to art galleries) in these terms.

Bourdieu devotes a great deal of discussion to the link between cultural capital and performance in examinations in the French grandes écoles, where he identifies "*a tendency to prefer eloquence to truth, style to content*" (Bourdieu, 1967). Bourdieu describes the ways in which the criteria of university examiners reflect the values of the dominant classes, and argues that the more vague the demands of the examiners are, the less chance students from the lower classes will have of meeting these demands (Bourdieu & Saint-Martin, 1974). The same can certainly be argued of university entrance criteria (Karabel, 1984). However, few studies examine the link between cultural capital and university admissions (but see Kaufman & Gabler, 2004).

9.2 Research Questions

We aim to assess whether cultural capital is linked to success in gaining admission to Oxford University for those who apply – bearing in mind that applicants to Oxford are already a highly selected sample. Specifically, we address the following questions:

1. How do Oxford applicants vary in their cultural participation and cultural knowledge, according to parents' education, social class, gender and ethnicity?
2. Does cultural capital predict acceptance to Oxford?
3. If so, does its effect remain once we control for examination performance?
4. To what extent does cultural capital mediate the effect of:

    - Social class
    - Parents' education
    - Private schooling
    - Ethnicity
    - Gender

9.3 Data and Methods

Our analysis draws on the Oxford Admissions Study data-set which contains information on a representative sample of 1,700 applicants with British qualifications who applied to Oxford during the 2002 admissions cycle (Zimdars, 2007). The survey contained measures of cultural knowledge and cultural engagement and detailed information on the applicants' social background. Applicants' examination attainments and school type were also collected.

The data are analysed using descriptive statistics as well as binary logistic regression models where the response variable is gaining the offer of a place at Oxford.

9.4 Variables

Attainment: We include the mean GCSE exam grades (attainment at the end of compulsory schooling) and achieved and predicted A-level attainment (end of secondary schooling examination).

Cultural capital: Our analysis uses measures of cultural participation (visits to museums, art galleries, classical concerts and ballets) as well as cultural practices (reading habits), the number of books in the home and an adapted test of cultural knowledge (Sullivan, 2001). The survey questions are detailed in the Appendix.

Social background – parental class, parental education, ethnicity and schooling: We use the Heath and Martin self-completion version of the EGP social class

schema (Heath, Martin, & Beerten, 1998). The occupations and educational attainment of both parents are taken into account where applicable. The service class is split along the professional/managerial divide. Due to small numbers of observations of minority ethnic groups, we were forced to collapse the minority ethnic categories as follows: South-Asian (Indian, Bangladeshi and Pakistani[1]); Other; and Ethnicity missing. Schools are categorised as: grammar school, other state school (comprehensive) and private school.

Response variable: The binary response variable in the logistic regression is whether an applicant gained an offer for study at Oxford (coded as 1).

9.5 Results

We begin by tabulating gross associations between social background characteristics and gaining an offer for study at Oxford in Table 9.1. Turning to parental education, we see no statistically significant link between the education levels of an applicant's parents and their chances of gaining an offer. This finding is surprising as previous research on less highly selected samples of higher education applicants has found strong effects of parental education on higher education transitions (Grotsky, 2007; Mare & Chang, 2006). The lack of a significant effect may reflect a lack of variability in the sample, as the majority of the applicants had graduate parents. In contrast, social class matters – the 43.6% of applicants with two professional class parents clearly fare best in the admissions process. Managerial class applicants only enjoy a success rate of 33.9%. Missing class origin is associated with a 18.8% success rate: this replicates previous findings linking missing values regarding social class origin with disadvantageous educational outcomes (Rothon, 2008). The working class coefficient is insignificant. This might partly be function of the small number of observations within this group but it may also illustrate the highly self-selected nature of working class applicants among Oxford applicants. Our findings are in line with Bourdieu's identification of a distinct professional class stratum within the middle class, which is particularly successful in the education system (Savage & Egerton, 1997).

Table 9.1 also shows large gross differences in gaining an offer by gender and ethnicity – 40% of male applicants gained a place for study at Oxford compared to 34.1% of female applicants and 38.8% of White applicants gained an offer compared to 22.4% of applicants of South-Asian origin. This finding may seem surprising given that British Higher Education as a whole has seen increasing gender parity, and the disproportionate representation of ethnic minorities (Boliver, 2005).

[1] It would have been desirable to keep the South-Asian groups separately, especially as Bangladeshi and Pakistani students are frequently different to Indian students in studies of educational attainment or transitions. However, the small number of observations; 56 Indian applicants, 25 applicants of Pakistani origin and six Bangladeshi applicants, among the 1,556 applicants with British qualifications, rendered such a breakdown uninformative for the statistical analyses.

Table 9.1 Gross chances of gaining an offer by social background characteristics

	Percent of observations (column %)	Number of observations	Percent gained an offer (row %)
Parental education			
Two postgraduates	8.6	165	39.4
One postgraduate	20.4	394	38.1
At least one graduate	36.8	710	38.7
Professional qualification	13.2	254	32.7
A-levels or below	16.4	316	35.1
Missing	4.7	90	27.8*
Social class			
Two professionals	28.6	551	43.6**
One professional	37.3	720	36.4
Managerial class	20.4	394	33.9*
Clerical class	5.2	101	34.7
Working class	5.1	99	30.3
Class missing	3.3	64	18.8**
Other background measures			
Male	44.9	867	40.0**
Female	55.1	1,062	34.1**
White	78.0	1,504	38.8*
South-Asian	6.0	116	22.4**
Other ethnicity	16.0	309	33.6
School			
Comprehensive	55.8	1,077	35.7
Private	37.8	730	38.2
Grammar school	6.3	122	36.9
Total	100	1,929	37.0

*Difference almost statistically significant, **difference statistically significant. Statistical significance based on adjusted residuals greater or smaller than 2.0.

A possible explanation might be different subject choices by gender and ethnicity (Bickel, Hammel, & O'Connell, 1975). There is no statistically significant gross difference in admission by school type.

Table 9.2 shows the association between social background characteristics and cultural measures that might mediate any direct impacts of social origin on gaining admission. The correlation matrix for the different opeartionalisations of cultural capital is included in the appendix.

Respondents with graduate parents score higher than respondents with non-graduate parents on all the cultural measures (except for 'books'). Yet an even stronger link exists between social class and our cultural measures. Those with two professional class parents score highest on all measures of cultural capital. This group differs significantly even from families with just one professional class parent, thus emphasising the importance of homogamy in consolidating class advantage. If anything, gender differences in cultural capital advantage

Table 9.2 Distribution of cultural capital by social background

	Mean on cultural knowledge	Mean number of books read in last year	Mean number of books at home (I)	Mean cultural participation
Possible range	0–20	1–4	1–7	4–16
Observed range	0–19	1–4	1–7	4–16
Parental education				
Two postgraduates (reference)	10.7	3.75	6.10	10.19
One postgraduate	10.58	3.66	6.04	9.61
One graduate	10.24	3.66	5.89	9.53
Professional qualification	9.23*	3.61	5.46*	8.86*
A-levels or below	9.21*	3.47*	5.05*	8.35*
Missing	8.39*	3.38*	4.83*	8.77*
Social class				
Two professionals (reference)	10.74	3.69	6.09	9.71
One professional	10.03*	3.64	5.80*	9.43
Managerial class	9.50*	3.64	5.49*	9.11*
Clerical class	9.53*	3.38*	5.00*	8.31*
Working class	8.53*	3.37*	4.60*	7.80*
Class missing	8.28*	3.47	5.35*	8.96*
Other background measures				
Male (reference)	10.07	3.52	5.70	8.72
Female	9.88	3.70*	5.70	9.76*
White (reference)	10.21	3.64	5.80	9.40
South-Asian	8.57*	3.41*	4.80*	7.57*
Other ethnicity	9.34*	3.59	5.56*	9.47
School				
Comprehensive (reference)	9.64	3.60	5.61	8.90
Private	10.52*	3.65	5.84*	9.93*
Grammar school	9.52	3.61	5.64	8.92
Total	9.96	3.62	5.70	9.29

(I) A mean of 4 on the number of books measure means the applicant has got 51–100 books in the home. A mean of 5 means the applicant has between 101 and 250 books in the home and a mean of 6 means the applicant has between 251 and 500 books in the home.

*Difference statistically significant at 0.000 level from reference category. Bonferroni analysis.

females, and are therefore unlikely to account for a gender gap in admission rates. Cultural measures do, however, differ by ethnicity and schooling, with South-Asians scoring significantly lower than their white peers, and private school students scoring significantly higher on most measures than state school students. So, if measures of cultural participation and knowledge were found to be significant in predicting which students are successful in the competition for a place at Oxford, then these measures might mediate some of the gross effects of social class, ethnicity and schooling. This is formally tested in the logistic regression analyses in Table 9.3.

Table 9.3 Logistic regression model of gaining an offer (coded as 1) for candidates with GCSE and AS/A2-levels

	Model 1		Model 2		Model 3	
	Class and education		Structural and meritocratic controls		Final culture model	
	b	s.e.	b	s.e.	b	s.e.
Class						
One professional	−0.27**	0.13	−0.32***	0.15	−0.26*	0.15
Managerial class	−0.41***	0.16	−0.47**	0.17	−0.39**	0.17
Clerical class	−0.60**	0.29	−0.54***	0.30	−0.34	0.31
Working class	−0.40	0.26	−0.32	0.28	−0.16	0.28
Class missing	−1.17***	0.41	−1.50***	0.50	−1.70***	0.59
Education						
One postgraduate	0.19	0.24	–	–	–	–
One graduate	0.20	0.22	–	–	–	–
Professional education	0.03	0.26	–	–	–	–
A-level or below	0.21	0.26	–	–	–	–
Missing	0.52	0.37	–	–	–	–
Other background						
Female	−0.27***	0.11	−0.45***	0.13	−0.40***	0.13
South-Asian	−0.95***	0.29	−0.84***	0.34	−0.72**	0.34
Other ethnicity	−0.16	0.21	0.34	0.24	0.37	0.25
Private	0.06	0.12	−0.29**	0.13	−0.35**	0.14
Grammar	0.07	0.21	−0.09	0.23	−0.10	0.23
Structural controls						
Social sciences	–	–	−0.32	0.16	−0.13	0.17
Medicine test takers	–	–	−1.27**	0.25	−1.02***	0.26
Maths test takers	–	–	−0.12	0.25	0.18	0.26
Other subject	–	–	0.31	0.16	0.57***	0.17
Post qualification candidate		–	0.13	0.76	−0.55	0.88
Meritocratic controls						
GCSE	–	–	2.04***	0.17	1.99***	0.18
GCSE squared		–	0.69***	0.25	0.66***	0.26
Fewer than 4 as predicted at A-level		–	−0.55***	0.13	−0.54***	0.13
Fewer than 3 as predicted at A-level		–	−1.02***	0.27	−1.09***	0.27
Cultural capital measures						
Cultural participation		–	–	–	−0.01	0.03
More than 500 books in the home		–	–	–	0.03	0.06
Read more than four books per year		–	–	–	0.41***	0.16
Cultural knowledge score		–	–	–	0.07***	0.02
Constant	−0.28	0.23	0.33***	0.19	−0.92**	0.47
DF	15	–	19	–	23	–
chi square	39.11***	–	300.53***	–	318.36***	–

Reference categories: Class – two professional class parents; education – two postgraduate parents; female – male; ethnicity – white; school – state school comprehensive; division – humanities; post-qualification – pre-qualification, A-level predictions – three A-levels at grade A predicted; cultural participation – continuous scale; more than 500 books in the home – less than 500 books in the home – read more than four books per year – read fewer than four books per year; culture quiz score – continuous scale.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.001$.

The first model replicates the social class, gender and ethnicity findings from Table 9.1 with positive effects for having two professional class parents, being male and being white. The second model shows that subject choice and educational attainment do not explain this pattern as the reduction of both from the female and the South-Asian coefficients remain statistically significant – the female coefficient is indeed increased due to the higher educational attainment of this group compared to their male peers.

Perhaps most noteworthy in the second model is the change in the private school coefficient: controlling for the high educational attainment of private school students they face a net disadvantage in the selection process to Oxford. This means that, attainments being equal, selectors exhibit a preference for state school students over private school students.

Cultural capital measures are introduced in model 3. The measures of 'beaux arts' cultural participation and the number of books in the home are not significant. Reading habits as well as cultural knowledge, however, have a positive significant effect. Overall, the most powerful addition to the model is not cultural participation, but actual cultural knowledge. The inclusion of cultural measures reduces the social class effect to insignificance for all social backgrounds except the missing group but it does not actually change the size of the coefficients, thus suggesting merely the loss of some statistical power. The South-Asian effect is slightly reduced but remains large and significant. The private school effect is increased and the female coefficient fluctuates in line with the observed gross difference of male and female applicants on the measures of cultural participation and cultural knowledge. The inclusion of cultural measures also reduces the linear effect of GCSE performance, although the exponential effect remains unchanged. This suggests that for students with exceptionally high GCSE attainment, cultural measures do not matter as much as for those with perhaps just very good rather than outstanding attainment in secondary school.

Despite their limited power in mediating some of the direct effects of social origin on admissions chances, the significance of the cultural factors in general suggest selectors pick up on the cultural dimension during the selection interviews. Ethnographic research on the selection process suggests that factors such as depth of thinking as well as breadth of reading and general knowledge factor into the interview process (Zimdars, 2007: 200–309). A students' score on the test of cultural knowledge is likely to reflect some of these characteristics.

9.6 Discussion

This analysis has established that cultural capital is linked to applicants' chances of gaining a place at the University of Oxford. Furthermore, we have contributed to efforts to refine the cultural reproduction perspective, by distinguishing between the effects of beaux arts participation, reading, and cultural knowledge. Participation in the beaux arts alone was not found to increase the chances of gaining a place for study at Oxford.

We find that, even among our highly-selected sample, cultural capital is strongly related to social background characteristics. Applicants with graduate parents score higher on our measures of cultural capital than those whose parents did not have degrees; those with two professional class parents have significantly more cultural capital than their peers; private school students score higher than state school students, and South-Asian applicants score lower on the cultural capital measures than white applicants. Finally, female applicants score more highly than male applicants on the number of books they have read in the last year and on cultural participation – there are, however, no significant differences between the sexes regarding the mean cultural knowledge score and the number of books in the home.

We were particularly interested to investigate the extent to which cultural capital mediates the direct effects of social background on gaining an offer for study at Oxford. Our first surprising finding is that, while cultural capital is related to the education level of parents, parental education has no direct impact on the chances of gaining a place at Oxford. This contradicts other research on less selected samples of students (Mare, 1995). While it is highly likely that parental education affects the probability that a student decides to apply to a highly selective university in the first place (Grotsky, 2007), we do not find any evidence to support a link between parental education and gaining a place conditional on application. In contrast, we find that social class affects admissions decisions. But contrary to the expectation that differences in cultural capital would account for differences in admissions rates between the professional and managerial class, this effect is not mediated by the inclusion of cultural capital measures.

The issue of state and private schooling has dominated debate on Oxford admissions. While there is no gross effect of schooling on the chances of gaining an offer, this changes when we take prior academic attainment into account. Given the superior performance of private school students at GCSE, we see a negative effect of having attended a private school on the chances of gaining an offer. Qualitative research on admission to Oxford has shown that this is due to the discounting of the private school performance by selectors (Zimdars, 2007). This is partly driven by a desire to comply with government targets for state school intake (University of Oxford, 2004), but can also be justified by the fact that private school students actually perform less highly at Oxford University than state school students with the same secondary school attainment levels (Halsey, 1992; Zimdars, 2007). We find that the discounting of the performance of private school students is further increased when taking into account their high level of cultural capital, in particular cultural knowledge.

Although much of the debate regarding Oxford admissions has been concerned with social class, our analysis suggests that the effect of gender and ethnicity are also striking. While 54.2% of our sample were female and 6.6% from South-Asian backgrounds, the representation of these groups dropped to 49.8% and 4.0% of the admitted students respectively. Both decreases in representation are statistically significant. Neither subject choice nor educational attainment explain these differences. The inclusion of cultural capital measures, however, contributes to explaining the South-Asian disadvantage. Here, the difference in admissions

chances compared to white applicants drops by 4.6% points from 18.4 to 13.7 (Table 9.3 model 2 vs model 7) although the South-Asian coefficient still remains large and significant in our final models. If anything the inclusion of cultural capital measures further increase the female disadvantage. Differences in cultural capital then cannot account for differences in success of gaining an offer by gender and only constitute a small part of the disadvantage faced by South-Asian applicants.

To sum up, this chapter investigated whether Bourdieu's concept of cultural capital could be quantified in terms of its influence on the chances of being offered a place for undergraduate study at the University of Oxford. We examined the extent to which measures of cultural capital, operationalised as both cultural involvement and cultural knowledge, mediate the effects of other social background characteristics. In particular we have tailored the cultural knowledge scale previously developed by Sullivan (2001) to suit the context of a highly competitive educational transition. We find that cultural knowledge, rather than participation in the beaux arts per se, helps to predict the chance of getting a place at Oxford. We therefore suggested the need for care in choosing the most appropriate cultural capital measures for the context under study. In the context of admission to Oxford, what matters is a relationship of familiarity with culture, rather than just participation in culture. In other words, is not enough for parents to simply take their children to the museum, but children who read, understand high culture, and cultivate the cultural knowledge rewarded by the education system, fare particularly well in the competition for a place at Oxford. Differences in cultural capital, however, cannot account for most of the differences in admissions rates by gender, ethnicity and class. The fact that we find a professional class advantage which cannot be explained by differences in cultural resources may be seen as running counter to Bourdieu's postulation of cultural capital as the main differentiator between fractions of the middle class.

Appendix Cultural capital survey questions

1. Number of books in the Home Question

How many books are there in your home?
There are usually about 40 books per m of shelving. Do not include magazines. *(Please tick only one box.)*

None (1)
1–10 books (2)
11–50 books (3)
51–100 books (4)
101–250 books (5)
251–500 books (6)
More than 500 books (7)

2. Cultural participation question and reading habits question

During the last year, how often have you participated in these activities?
(Please tick one box on each line.)

	Not in the past year	Once or twice	About 3 or 4 times	More than 4 times
1. Visited a museum or art gallery	( )	( )	( )	( )
2. Attended an opera, ballet or classical concert	( )	( )	( )	( )
3. Watched live theatre	( )	( )	( )	( )
4. Played a musical instrument	( )	( )	( )	( )
5. Read a book for pleasure	( )	( )	( )	( )

Responses 1–4 were combined to form the cultural participation index. Response 5 was used to construct the reading habit measure.

3. Cultural knowledge test (adapted from Sullivan, 2001)

Each of the following people has been distinguished in one of the fields of politics, music, literature, art or science. For each person, please say which category you associate him or her with. If you do not know, do not guess, just tick "don't know".
(Please tick one box on each line.)

	Politics	Music	Literature	Art	Science	Don't know
Albert Einstein	( )	( )	( )	( )	( )	( )
Graham Greene	( )	( )	( )	( )	( )	( )
Clara Schumann	( )	( )	( )	( )	( )	( )
Andy Warhol	( )	( )	( )	( )	( )	( )
George Eliot	( )	( )	( )	( )	( )	( )
Martin Luther King Junior	( )	( )	( )	( )	( )	( )
Sergei Rachmaninov	( )	( )	( )	( )	( )	( )
Galileo Galilei	( )	( )	( )	( )	( )	( )
Georges Braque	( )	( )	( )	( )	( )	( )
Tracey Emin	( )	( )	( )	( )	( )	( )
Miles Davis	( )	( )	( )	( )	( )	( )
Gabriel Garcia Marquez	( )	( )	( )	( )	( )	( )
Louis Pasteur	( )	( )	( )	( )	( )	( )
Mahatma Gandhi	( )	( )	( )	( )	( )	( )
Marie Curie	( )	( )	( )	( )	( )	( )

(continued)

Appendix (continued)

	Politics	Music	Literature	Art	Science	Don't know
Akira Kurosawa	( )	( )	( )	( )	( )	( )
Sirima Bandaranaike	( )	( )	( )	( )	( )	( )
Olivier Messiaen	( )	( )	( )	( )	( )	( )
Lloyd George	( )	( )	( )	( )	( )	( )
Aleksander Solzhenitsyn	( )	( )	( )	( )	( )	( )

4. Correlation matrix for cultural capital operationalisations

	Cultural participation	Culture quiz	Keen reader (continuous)	Number of books in the home
Cultural participation	1			
Culture quiz	0.38*	1		
Keen reader (continuous)	0.24*	0.24*	1	
Number of books in the home	0.33*	0.33*	0.26*	1

A principal component analysis reveals that the factors mainly map unto one underlying concept. However, with a Crombach Alpha of 0.55 the scale is just short of reliable.

*Significant at the 0.000 level.

Chapter 10
Applying Bourdieu's Concepts of Social and Cultural Capital in Educational Research in Greece and Cyprus

Marios Vryonides

Abstract This chapter examines the application of the concepts of social and cultural capital in empirical research seeking to provide explanations for educational processes relating to post-secondary school choice making in contemporary Cyprus and parents' aspirations in relation to their children's educational and occupational prospects in Greece. It argues that Bourdieu's work is a valuable source of ideas and concepts that provide the framework for quantitative investigations on a number of educational and sociological issues, particularly those that refer to social and cultural reproduction. Moreover, it addresses the criticism that is often associated with the limitations of quantification. This criticism asserts that quantitative techniques often do not explore with sufficient subtlety the social dynamics that are produced by the social contexts within which social action (i.e. educational choice making) occurs.

10.1 Introduction

In a recent commentary, DiMaggio (2007) argues that Bourdieu's early work in the field of education had been a revelation because amongst other things it allowed for generating hypotheses about individual-level status attainment within institutionalized structures of the school through which students are required to navigate. Indeed, his work on cultural and social reproduction (Bourdieu, 1977b) as well as on the forms of capital (Bourdieu, 1986) and on how non-monetary capital can produce benefits for its possessors, have since allowed sociologists to explore their effects on achievement and academic success. In recent decades, a number of Bourdieu's concepts have been taken up and studied in quantitative as well qualitative research. This chapter focuses on how the concepts *cultural* and *social capital*

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have been applied in two quantitative investigations seeking to explain unequal patterns in educational decision making as well as how they influence parental educational and occupational aspirations in contemporary Cyprus and Greece. It is hypothesised that cultural and social capital resources available to families have positive effects on students' academic achievement and in turn to educational aspirations.

10.2 The Importance of Cultural and Social Capital in Shaping a Habitus for Social Action

Bourdieu uses the word *capital* to describe the social products, both resources as well as rewards, of a field through which individuals carry out competitive social action. These social products can be material or ideational. According to Bourdieu capital can exist in three forms: economic, social and cultural (Bourdieu, 1986). Economic capital is money, property and other material objects. Social capital refers to social networks and connections, which can provide access to valued social goods. Social capital as an individual resource often facilitates the pursuit of social outcomes in the status attainment process. Equally important – and with the potential to affect educational processes in many ways – is Bourdieu's concept of cultural capital (1977b, 1986). Cultural capital refers to legitimised knowledge present in a home environment, which allows parents and children to secure advantages from the educational process. For Bourdieu, cultural capital may take many forms; it can be reflected in behaviour, dispositions, knowledge and habits acquired during socialisation. Or, it can be accumulated through investment in education and training or in the acquisition of cultural goods.

The importance of the different capitals is reflected in the formation of *habitus*. Bourdieu (1998) argues that individuals are endowed with durable cognitive structures and a dispositional sense of action that 'directs' them to appropriate responses to given situations. When individuals come to make certain decisions (e.g., about their future education, occupational and career outcomes, or those of their offspring) their choices are influenced both by 'socialised frames of perception and thought' and by 'real and changing social structures' (Ball, Maguire, & Macrae, 2000: 22). Within specific fields, individuals' strategies and actions therefore make sense depending on how they have socialized. According to de Jong (2001: 70):

> In every field one can observe battles between insiders and outsiders, between the privileged and the underprivileged, the upper and under class, or between the two adjacent factions of the same class (…). Those who monopolize the specific capital of a field are always inclined to a conservative strategy that can help them maintain their power

Individuals and families inherit different social positions and possess unequal amounts of capital relative to other 'competitors.' Some are relatively better equipped, better placed, and more informed to make successful choices and thus in a more advantageous position than those lacking the appropriate resources. Social

action then is affected by the 'amount' and the 'quality' of the different capitals that are available to individuals.

10.3 Operationalisation of Cultural Capital and Social Capital in Cypriot and Greek Contexts

The ensuing problem in trying to apply Bourdieu's concepts to Cypriot and Greek contexts refers to the extent to which they are relevant outside of their original French context. Do they serve as covert mechanisms that help reproduce social advantage to those who possess them? Looking at the way Greek and Cypriot societies have developed in the past century and the centrality that education played in processes of intra- and inter-generational upward social mobility and of safeguarding social advantages having by and large class consolidation effects, one can argue that they a relevant exploratory framework.

Cyprus[1] and Greece are societies that have transformed from pre-modern to traditional to societies. They exhibit many characteristics found in developed Western societies in terms of economic structure and social and political organization. Greece has been a member of the European Union (EU) since 1980, a landmark which for many signalled its inclusion in the Western world, while Cyprus more recently became a member in 2004. Amidst ideological antagonism and tension that are the result of competing modern and traditional values and other societal elements (Argyrou, 1996; Green & Vryonides, 2005; Vryonides, 2007a, b), important questions arise about educational opportunities and equity when studying strategies used by individuals and families attempting to secure the best possible outcomes for their children.

Social position affects people's education choices based in part on how they view the gamut of social relations, but also based upon how resources available to them convert into value on the educational market. Thus cultural and social capital resources are a major influence in shaping opportunities for post-secondary school educational choice-making as well as for influencing parental educational and occupational aspirations for children. As with other modern societies, for middle class families in particular education is at the centre of strategies to secure the reproduction of advantageous social positions or to further enhance them (Ball, 2003). In the Greek and Greek-Cypriot society, cultural and social capital resources are frequently at the core of what constitutes distinctive class awareness. In this respect one should not expect to find significant differences in the way these two forms of capital operate in both societies.

[1] Reference to Cyprus in this chapter refers only to the Greek Cypriot community, even though the Island consists of a Turkish Cypriot community as well. Since 1974 the two communities occupy the South and North part of the island respectively and maintain by and large limited contact.

10.4 Methods

How cultural and social capital have been operationalised in previous studies points to ways that they can be applied in empirical research in two studies conducted in Cyprus and Greece. The first study presented here attempts to investigate the effects of cultural and social capital in educational choice making amongst graduating secondary school students in Cyprus (Vryonides, 2003). Data were collected from 404 students graduating secondary schools and from their families. In the second study, 735 parents in Greece whose children were attending top primary schools participated in a survey that investigated factors shaping aspirations and expectations regarding the future of their children (Vryonides, 2007b). In both cases participants were asked to provide information that could be used as indicators of the presence of social and cultural capital. Next, I discuss some of the findings of these two studies: first, I present the effects of cultural capital in Cyprus and then in Greece. Second, I move to present the effects of social capital in each society respectively.

10.5 Cultural Capital: Analyses and Discussion

Cultural capital as legitimised knowledge present in a home environment allows parents and children to secure advantages from the educational process. Bourdieu assumed that high parental level of education revealed high level of parental cultural capital (1977b). However, this operationalisation of the concept has been characterised as inadequate (Sullivan, 2001) and not capturing the broadness of the concept. Thus, it is often remarked that cultural capital is so widely operationalized in empirical research because Bourdieu's definition of the concept is very broad and not easily quantifiable. Empirical studies adopting a quantitative approach, for example, have defined cultural capital as cultural 'competence' and 'familiarity' interpreted as knowledge of and participation in the dominant culture (Aschaffenburg & Maas, 1997; DiMaggio, 1982; DiMaggio & Mohr, 1985; Kalmijn & Kraaykamp, 1996; Katsillis & Rubinson, 1990; Lamb, 1989). More recently, De Graaf, De Graaf, and Kraaykamp (2000) and Sullivan (2001) measured cultural capital by investigating reading habits and beaux-art participation. These studies suggested that attendance at 'high' cultural events (concerts, galleries, museums etc.) or familiarity with 'high' culture or literature reading habits could be used as indicators of presence of cultural capital.

The different ways cultural capital has been operationalised quantitatively raises some methodological issues not least of which is that the studies are inconclusive as to the effect of cultural capital in various educational processes. That said, I would not go as far as Kingston (2001) in characterizing cultural capital as a concept which did not fulfil its "promise." Along with Lareau and Weininger (2003) who deemed problematic "dominant interpretations" of cultural capital that

tend to associate it in terms of "highbrow" status practices, I have in previous work (Vryonides, 2007b) made a similar point by drawing attention to complementary ways by which cultural capital can be examined. One is by resorting to qualitative research methods which focus on micro-sociological aspects of cultural capital as part of familial resources and practices affecting (intentionally or unintentionally) various educational outcomes (e.g., academic achievement, educational choice making, etc.). The latter, however, is more applicable here as it concerns the value of quantitative techniques and the potential that they offer to generalise findings, thus offering macro-sociological perspectives of the current state of social justice and the role of education in society remain important.

In the Cypriot study, data were collected through a survey of a representative sample of 404 secondary school students and from their parents in Nicosia, Cyprus. The sample was selected using a stratified technique and the overall response rate was 90%. Students were in their final grade/year and attended all kinds of secondary schools (public/general, technical and private).

Cultural capital was examined in order to investigate whether it was influencing in a distinctive way the educational prospects of students coming from different social class backgrounds. Specifically, students' academic achievement was examined as it is generally accepted that this has a unique role in shaping students' future educational choice making. Entrance to chosen fields of study in higher education or the decision to leave formal education are directly linked with attainment through a system of selection where achievement is the sole determinant. Thus, it was necessary to investigate whether cultural capital was an important factor that was transforming social class advantage to academic success.

The study of Greece by Katsillis and Rubinson (1990) offered key methodological directions for how to approach the operationalisation of cultural capital quantitatively. Katsillis and Rubinson used attendance to four cultural activities as indicators of presence of cultural capital among Greek secondary school students (attendance to theatre and lectures and visits to museums and art galleries). Following a similar procedure, five cultural activities were identified: attendance to theatre, lectures and concerts and visits to museums and art galleries. In order to expand the model of measurement for indicators of the presence of cultural capital, two additional facets were included: ownership of cultural/educational objects (Roscigno & Ainsworth-Darnell, 1999) and students' literature reading habits other than books required by school (De Graaf et al., 2000). For cultural/education resources, students were asked to indicate whether they had home access to a personal computer, the Internet, encyclopaedias, a library, or authentic art works. Students were also asked to indicate the number of literature books they had read in the previous 12 months other than those required by the school. Table 10.1 presents mean and standard deviation scores of the cultural capital and other variables used in the analysis.

Although Katsillis and Rubinson (1990) did not find a cultural capital effect on academic achievement, it is expected that this expanded model of operationalization may produce different results. The general relationship between the cultural capital indicators used in the analysis and academic achievement was examined

Table 10.1 Descriptions, means and standard deviations of variables (Cyprus)

Variable	Description	Metric	Mean	SD
Cultural activities	Students attended theatre, museum, concert, art gallery, lecture	0 = none of these activities 5 = at least once in all the activities	1.80	1.54
Cultural/educational resources	Personal computer, Internet, encyclopaedia, library, authentic artwork	0 = none present at home 5 = all present at home	2.17	1.57
Literature	Number of books read in the past year	0 = none 5 = five or more	1.54	1.96
Students' school achievement	Grade point average in 5th grade in the lyceum/technical/ private school	1 = below 14 7 = 19.1–20	3.74	1.92
Upper middle class	Students' social class origin	0 = other 1 = upper middle class	0.17	0.38
Working class	Students' social class origin	0 = other 1 = working class	0.44	0.50
Lower middle class	Students' social class origin	0 = other 1 = lower middle class	0.39	0.49
Gender	Male or female	0 = female 1 = male	0.44	0.50
Students' effort	Hours students spend on average on school related work	0 = none 7 = more than 3 h	3.45	1.90

using Pearson correlation coefficients. All the cultural capital variables were positively related to academic achievement: reading literature ($r = 0.389$, $p < 0.001$), participating to cultural activities ($r = 0.303$, $p < 0.001$) and owning/ having access to cultural/ educational objects ($r = 0.354$, $p < 0.001$). For example, reading literature books other than those prescribed by the school curriculum had a moderately positive correlated with high grades in school.

Next, multiple linear regression was used to investigate further the extent to which the three measures of student cultural capital together with other variables predicted students' academic achievement. Table 10.2 presents the standardised regression coefficients of cultural capital, social class, gender and school effort on academic achievement. Examination of the results where all the variables were added in the model indicates that they account for 37% of the total variance in achievement.[2]

Results indicate that students' effort was the best predictor of school achievement ($\beta = 0.327$, $p < 0.001$) while being from the professional middle class (compared

[2] It should be noted that only 21% of the variance in academic achievement is accounted for when the cultural capital variables alone are used.

to being from the lower middle class) was the second best predictor ($\beta = 0.218$, $p < 0.001$). Of the cultural capital variables, reading literature and having access to cultural/educational resources were the next important predictors ($\beta = 0.174$, $p < 0.01$ and $\beta = 0.167$, $p < 0.01$), whereas attending cultural activities was not found to be important. Based on the regression analysis, it appears that student cultural capital had a modest effect on academic achievement. Cultural consumption in the form of attendance at various cultural events did not seem to offer any real positive returns in terms of better achievement at school, which concurs with the findings of Katsillis and Rubinson's (1990) earlier study. However, reading literature and having access to certain educational/cultural resources at home appear to influence school achievement positively, which indicates that other manifestations of cultural capital can be beneficial to educational attainment.

For the Greek study, data come from a survey conducted by the Social and Educational Research Laboratory of the Department of Pre-School Education of the University of the Aegean. A network of research collaborators serving as primary school teachers collected a stratified sample of 735 parents whose children attended to top primary school grades. The overall response rate was 80%. Similar findings to the Cypriot study in terms of cultural capital resources available in the home environment were reported.

Tables 10.3 and 10.4 provide information about parents' reading behavior and access to cultural capital resources and attendance to cultural activities. The data indicate a clear advantage of parents located in the upper professional class. Table 10.3, for example, shows that on average parents from the professional class

Table 10.2 Predictors of student achievement in Cyprus (N = 404)

Standardised coefficients	
	Student achievement
Literature	0.174*
Cultural activities	0.025
Cultural/educational objects	0.161*
Professional middle class (reference = lower middle class)	0.218**
Working class (reference = lower middle class)	–0.080
Gender (1 = male)	–0.025
Effort	0.327**
R squared	0.370

*$p < 0.01$, **$p < 0.001$.

Table 10.3 Number of books read in the past 12 months (Greece)

	Mean	Std. deviation
High professional/managerial/administrative	3.39	1.570
Middle professional	2.86	1.628
Lower middle	1.99	1.723
Working/farming	1.21	1.557
Not in paid employment	1.84	1.802

$F(4,728) = 33.83$, $p < 0.001$.

Table 10.4 Percentages of ownership of cultural capital resources and attendance of cultural activities at least once during the past 12 months (Greece)

	Encyclopaedia	Music instrument	PC	Internet connection	Library with books	Theatre	Art gallery	Museums	Concerts
High professional/ managerial/ administrative	91.3	73.9	100.0	73.9	87.0	76.1	37.0	71.7	54.3
Middle professional	88.8	61.0	90.7	74.1	87.3	75.1	34.6	70.7	69.3
Lower middle	82.0	40.4	90.7	54.0	78.3	61.5	21.7	56.5	56.5
Working/farming	73.3	39.9	72.9	45.0	64.4	50.5	11.4	44.3	52.4
Not in paid employment	75.7	36.4	78.5	40.2	68.2	53.3	11.2	56.1	43.0
X^2	16.86*	43.71**	40.93**	41.68**	25.30**	24.64**	35.29**	12.68*	14.21*

*$p < 0.01$, **$p < 0.001$.

read more books per year. Similarly, Table 10.4 indicates that students from the professional classes have greater access to cultural capital resources. Notably, these are the same parents who later reported higher aspirations for the future educational and occupational prospects of their offspring. Elsewhere I have commented (Vryonides, 2007a) that this connects to the way that available cultural and social capital resources operate in an interconnected fashion to shape an environment of a *habitus of success,* contrary to a *habitus of compromise* that is observed when such resources are not available in ample quantities.

10.6 Social Capital: Analyses and Discussion

For Bourdieu (1986: 248), social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition." According to Bourdieu, social capital is power with economic capital concealed at its root. He is interested in the ways with which social capital, through its linkages with other forms of capital, is accumulated and reproduced to perpetuate social inequality. Social capital operates differently depending on the social and cultural context.

To date, only a limited number of studies explore the kind of social capital typically observed in Greece and Cyprus which are characterized by extra-familial connections and networks. Wong (1998) is one example of a recent study that has examined social capital as social networks outside the educational field but that still affect educational processes. Specifically, he investigated the importance of social capital for the educational attainment of children in socialist Czechoslovakia. He defined social capital as social relationships and networks outside the family that can be used to establish favourable conditions (e.g. social relationships with institutional agents) for engaging and advancing in the educational system. In particular, he operationalised social capital as membership of the Communist Party since "the concentration of economic, political, and ideological power made the Party a major instrument of the social distribution of resources and inequality" (Wong: 5). He found that there was a relationship between political affiliation and children's educational attainment, suggesting that social networks generated from involvement with the communist party had positive effects on children's educational outcomes.

In a similar fashion, social capital resources with political, educational and administrative agencies have historically been utilised by Greek and Cypriot families in order to advance individual and familial social objectives (Green & Vryonides, 2005; Vryonides, 2003). This relates to the structure of the modern Greek and Cypriot societies where patronage and clientelistic relationships otherwise known as "mesa" or "rousfeti" have historically proven to be one of the most effective ways to secure social advantages as the family often constitutes the most immediate resource for providing support in realising the occupational aspirations of its youngest members (Christodoulou, 1995). In the Cyprus study, for example, family social capital emerged as a major resource affecting students' choices for post

Table 10.5 Ways students expected families to help them secure employment (Cyprus)

I expect my family to help me …	PMC	LMC	WC	Total[a]
1. With their connections/acquaintances	19	47	36	102
2. Money/financially	7	6	15	28
3. Moral support	5	8	6	19
4. Join family business/work with parents	5	8	5	18
5. Guidance/advice	3	7	0	10
6. Help me look for a job	0	0	15	15
7. Not sure/don't know	2	3	4	9
8. Other answers	7	16	16	39
Total	48	95	97	240

[a]1. The numbers refer to answers and not to respondents. Some respondents cited two or in few cases more than two ways they expected their families to help them in their employment.

2. In the Cypriot study, families were classified in three social class groups. For example, high professional/managerial/administrative and middle professional class were merged into one category.

secondary school destinations; this was a primary means by which young people expected to materialise their educational and occupational aspirations. Similarly, in the Greece study parents were asked more directly to indicate the extent to which they felt they could utilise their potential social capital resources, amongst other ways to support their children to realize their occupational aspirations.

In the Cypriot survey referred to previously, secondary school students were asked whether they expected their family to help them secure employment. This question must be understood in the context of a society where the aforementioned social capital resources are regarded as paramount in such pursuits. Based on student responses, it emerged that 72.3% of them expected their family to help them in their future employment. Students' were then asked "How do you expect your family to help you find employment?" and their answers provided a clear link to familial social capital. Table 10.5 presents a summary of the different answers provided. It can be seen that by far the most common response (nearly half) referred to family social capital – i.e., social networks, connections, friends, acquaintances, etc.

In total, 102 answers pointed to resources directly connected to familial social capital (in terms of inter-familial networks), whereas other answers indirectly connected to different aspects of familial social capital (e.g., join family business, work with parents). An interesting point emerged concerning the potential to actually mobilize family social capital. Although students from all social class family backgrounds expected assistance, the relevant question became who was most likely to successfully benefit from this resource. This answer was partly given by the study carried out in Greece as will be shown next.

In the Greek survey, parents of primary school students were asked about the social capital resources and their willingness to resort to them. Almost all the parents who took part indicated readiness to help their children secure employment in a society where youth unemployment is one of the most pressing concerns for

Table 10.6 Parental help with social networks and connections and parents expectations for children's education (Greece)

	Mean	Std. deviation	F	Sig
Parental help with social networks and connections (0–8)				
High professional/managerial/administrative	6.93	0.929	9.289	0.000
Middle professional	5.44	2.359		
Lower middle	5.32	2.099		
Working/farming	4.99	2.359		
Not in paid employment	4.67	2.339		
Level of education I wish my child to reach (1–6)				
High professional/managerial/administrative	5.91	0.285	17.940	0.000
Middle professional	5.77	0.431		
Lower middle	5.64	0.565		
Working/farming	5.34	0.773		
Not in paid employment	5.49	0.692		
Level of education I realistically expect my child to reach (1–6)				
High professional/managerial/administrative	5.74	0.444	20.331	0.000
Middle professional	5.56	0.554		
Lower middle	5.30	0.716		
Working/farming	5.00	0.910		
Not in paid employment	5.03	0.995		

many families. When asked about the possible ways they anticipated they could realistically help their children, one answer stood out from the rest – parents' acquaintances and networks. Interesting social class patterns emerged from an ANOVA test of parents asked to indicate level of confidence (on a scale from 0 to 8) that their available networks would prove beneficial for their children. Based on Scheffe post hoc test comparisons, it is clear that the High professional/Managerial/Administrative class was significantly more confident about this potential resource than the rest (Table 10.6).

In short, the results from both the Cyprus and Greece studies highlight the importance of the 'quality' of the networks available to different social class families as well as a strong willingness among parents to resort to their networks for support.

10.7 Implications and Conclusion

Bourdieu's theories allow researchers to put to test the assertion that the availability of different non-monetary forms of family capital within social, economic, political and cultural contexts provide educational advantage. Their interconnectedness and value within certain fields shape different 'horizons of action' (Hodkinson & Sparkes, 1997) for different families. The importance, according to Ball, Davies, David, and Reay (2002: 55), could be both material and perceptual: material, in the sense that they relate to cost and perceptual, in the sense that they refer to "confidence, awareness and expectation, community and tradition." In Greece and Cyprus contexts, these structures shape the life chances of young individuals.

The different forms of capital (material or non-monetary) acquire specific value within particular social contexts and fields and have the potential to produce substantially different profits for their owners. Professional middle class families in Greece and Cyprus have the potential to use their capitals more effectively compared with lower social class families. They can perform more successfully than other social groups what Bourdieu (1986) described as the conversion of one form of capital to another. This process points to interesting issues of fungibility between the various forms of capital. These interconnections of the various forms of capital have been highlighted by Ball (2003), who indicated that these forms of capital provide middle class families with several advantages in their strategies to secure the best possible prospects for their children in higher education. The financial capital of the middle classes allows them to "buy" better education and to pursue activities and own objects that signify a special relationship with knowledge and intellectual pursuits (cultural capital). Furthermore, parents' social position often affords the possibility of accessing social networks that can be beneficial as sources of indispensable information for educational processes and prospects, and for materializing the occupational aspirations of their children by accessing powerful patronage or links to other social networks. The sociological significance, as Bourdieu points out, is that when such processes escape observation and control, obscured perhaps by their complexity, they effectively transmit and reproduce power and privilege.

Chapter 11
Occupational Structures: The Stratification Space of Social Interaction

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Abstract The focus of this chapter turns to the analysis of quantitative data on occupations, and the use of data on occupations to study social stratification inequalities. The chapter argues that social interaction distance measures – an approach to understanding social stratification through the analysis of social interaction patterns – connect very easily with Bourdieu's conceptions of social space. Whilst Bourdieu resisted an explicit commitment to the measurement of social space and social stratification, it is possible to demonstrate a relation between Bourdieu's theorizations, and social interaction distance approaches. The chapter introduces an established methodology for studying social interaction distances between occupations, known as the CAMSIS approach (Cambridge Social Interaction and Stratification Scales, www.camsis.stir.ac.uk), and discusses its practical implementation. It is argued that this methodology allows researchers to measure and analyse social stratification from a Bourdieusian perspective.

11.1 Introduction

This chapter discusses social interaction distance ('SID') approaches to stratification. Such approaches theorise a structure of social stratification which is defined entirely according to patterns of social interaction between individuals, and derive measures – based on patterns of differential association – to map the 'social space' within which the interactions occur. Such approaches are related to Bourdieu's theoretical

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conceptualisation of 'social space', and to the implicit theoretical assumptions about social interaction which are under-developed, but deeply embedded, in Bourdieu's framework.

Bourdieu's own approach, whilst relational, does not focus on social relationships, understood as social networks or as an interactional order. This neglect of empirical social connection is deliberate, but means that Bourdieu fails to confront some of the implications that substantive social interaction has for his framework. Social networks are not only a resource competed over in various fields – in the form of differential association (or structured social networks) they are also a component feature of the fields within which agents manoeuvre (de Nooy, 2003). The neglect of networks is a gap in Bourdieu's framework, not least because many of Bourdieu's core concepts – habitus, field and, more generally, social space – depend upon assumptions about their interactional properties which are left unexamined and unmeasured. We argue that these assumptions can be fruitfully explored and extended, by developing a parallel theoretical account of 'social interaction distance', based upon an analysis of the substance and patterning of social networks.

11.2 Social Interaction Distance

11.2.1 The 'Social Space of Relationships' and the 'Space of Social Relationships'

Bourdieu's framework describes a relational 'social space' in which social position depends not on the intrinsic properties of groups or locations but on the configuration of relations which link them, and give them their significance. This 'space of relationships' (1985: 725) is made up of the various economic, social, cultural and symbolic elements of capital and the 'durable dispositions' of habitus (the enduring habits that people acquire in different social locations) which shape people's practices in structured ways. Bourdieu also insists on a 'relational' 'field' analysis of social life. This examines how distinct social 'fields' (various spheres of life, such as the education field, which are governed by their own distinct 'rules of the game' and within which agents struggle over valued resources) are organized by relations to economic and cultural resources. Such fields sit within the overall social space of relationships (1993: 38). In *Distinction* Bourdieu uses the relationship between cultural items and 'class fractions' to explore the overarching 'social space', studying 'social relations objectified in familiar objects' (1984a: 77). The logic of this as an empirical strategy is given by the theoretical assumption that people sharing a similar social position have similar social and lifestyle practices.

But whilst Bourdieu identifies a 'social space of relationships' he is less keen to identify a 'space of social relationships', with a relative neglect of social interaction within his framework. This is despite the fact that he makes an explicit link between cultural preferences and interaction choices, describing an affinity between patterns of lifestyle and patterns of interaction (e.g. 1984a: 241). Bourdieu's theoretical

framework suggests interaction patterns reflect and reproduce stratification position in the same manner as cultural tastes and lifestyles. Similarities of lifestyle (and habitus) are inseparable from processes of social interaction, and 'the surest guarantor of homogamy and, thereby, of social reproduction, is the spontaneous affinity … which brings together the agents endowed with dispositions or tastes that are similar' (1990a: 71).

Indeed, whereas some of Bourdieu's more detailed (sub-) field analyses look at the substance of social networks (e.g. 1996b), he does not elaborate these analyses theoretically. Social connections (as 'social capital') are a key element of the overarching 'social space', and of particular social fields, but Bourdieu tends to identify *position* in social space, and *field* relations, via relations to economic and cultural capital, with comparatively little reference to the patterning of networks. It has been noted that social capital is less theoretically developed in Bourdieu's work than the other capitals (Erickson, 1996; Field, 2003), and levels of social capital are seldom measured (Swartz, 1997; Warde & Tampubolon, 2002). Bourdieu treats social capital as a hierarchically differentiated resource arising from networks (1996b: 249), showing less interest in the nature of the networks that generate such resources.

Bourdieu distinguishes between 'structure and interaction', preferring to focus on the *underlying* structural relations to resources which generate particular patterns of social interaction (Bourdieu & Wacquant, 1992: 113). Yet key elements of Bourdieu's theoretical framework are predicated upon a particular form of network structure: homophily – a pattern of differential association in which agents tend to associate with those who have similar social characteristics. Bourdieu's account of social conditions is one of individuals and groups positioned by their access to differential resources. But networks emerge in his account not only in the form of social capital as a relational asset, but also – implicitly – in a more concrete manner, as enduring linkages generated by shared habitus and proximity in social space (Bourdieu & Wacquant, 1992: 117–118). People similarly located in social space are more likely to be seen as 'the same', and so 'the proximity of conditions, and therefore of dispositions, tends to be translated into durable linkages and groupings' (1985: 730). Bourdieu's model of relative distance within a social space has substantive implications for social networks and category membership, since position in social space 'defines distances that are predictive of encounters, affinities, sympathies, or even desires' (1998: 10–11). The implication is that 'those who are similar in terms of lifestyle prefer to interact socially and those who choose to interact socially tend to be similar in terms of lifestyle' (Prandy, 1999: 229).

Indeed, assumptions about the nature and impact of differential association lie at the heart of Bourdieu's theoretical framework, and raise questions about his neglect of social interaction. Bourdieu makes a clear distinction between the 'social space' as a theoretical space of relations, and concrete social networks as substantive social relationships. However this distinction – between structural relations and empirical connections – is not easy to maintain and, in fact, Bourdieu does not maintain it. Concrete social connections are implicit in his account as a series of assumptions about the differential nature of association which underpin the habitus and structure fields. Bourdieu's sociology is premised on the assumption that people tend to associate with others much like themselves, for reasons of structural opportunity

and proximity, and because their embodied predispositions make them seek out the comfortably familiar and similar. Shared dispositions result from the internalisation of shared conditions of existence, which Bourdieu presents as shared relations to the different forms of capital, but which also implies homophilous social networks. However, the existence of homophily cannot simply be assumed, and to adequately situate Bourdieu's account of the social space greater attention must be paid to the substance and patterning of social networks.

11.2.2 Social Interaction Distance (SID)

There is a distinct research tradition of social interaction distance analysis that uses patterns of interaction to identify a hierarchical stratification order (e.g. Laumann & Guttman, 1966; Stewart, Prandy & Blackburn, 1980). Such approaches to mapping inequality theorize stratification as a social interaction space, with the space identified by mapping the network of social interaction – patterns of friendship or partnership – which gives rise to relations of social closeness and distance. From this perspective, the structure of stratification is not an influence on patterns of association (in the sense that we might investigate the extent to which economic position affects friendship), rather differential patterns of association constitute the structure of stratification.

Such approaches depend upon some degree of differential association in social interaction. However, the resultant scales are empirically determined by actual patterns of social interaction, rather than being determined *a priori*. The impact of hierarchical position on our choice of friends and partners, as well as on our cultural tastes and activities, is well known. A range of cross-national evidence shows a powerful relationship between social association and social similarity, with marriage and friendship exhibiting clear patterns of homophily along lines of education, class, socio-economic status, and by religion and ethnicity (Kalmijn, 1991, 1998; McPherson, Smith-Lovin & Cook, 2001). Because people tend to associate with individuals from roughly similar social positions this information can be used to map the social space within which the relationships occur.

SID approaches theorise a social space – composed out of social interaction – seen as a structure of social distance. Partners, friends and acquaintances tend to be chosen from amongst those who share a similar lifestyle, which is in turn dependent on the resources and rewards available to groups of people. By forming close social relationships with individuals nearer to us in the social order, we thus – intentionally or unintentionally – help to confirm and reproduce that social order. This does not assume a simple model of in-group association, since some close relationships inevitably occur across social divides. The assumption is simply that close social ties are *more likely* between people similarly placed in the social order; through contiguity, through similar standards of lifestyle, through routine social interactions – at work, in the community and so on – which bring them and their families into contact with each other.

11.2.3 Interpreting Social Interaction Distance

The theoretical assumption underlying the idea of SID is 'of stratification arrangements that involve differences in generalised advantage (and disadvantage) and hence in lifestyle and in social interaction related to level of advantage and lifestyle' (Prandy, 1990: 635). One well known approach to developing such measures is the work of the 'Cambridge stratification group', concerned with the social distance between occupational positions (Stewart et al., 1980; Prandy & Lambert, 2003). The Cambridge approach uses patterns of social interaction to determine the relative distances between occupational groups (as indicated by higher or lower levels of interaction) and from these the nature of the social space in which the occupations are located. The group has developed hierarchical scales of stratification arrangements: an 'ordering of occupations on the basis of social similarity as defined by the extent of social interaction' (Prandy, 1999: 231). These, they argue, are scales of 'shared experience', measuring material and social advantage as 'indivisible concepts' (Stewart et al., 1980: 28). Once the nature of the distances between groups is identified, this is treated as a measure of stratification used to investigate other aspects of social life.

Social distance measures are well related to scales of status and prestige, and are sometimes interpreted as status orderings (Chan & Goldthorpe, 2007b; Laumann & Guttman, 1966: 170). But distance scales are also well-related to a variety of class schemas, and pick up on the elements of advantage captured by both (Lambert & Bihagen, 2007). Interaction distance orderings are not a measure of status, prestige or economic advantage alone, but rather tap into all three of these dimensions of advantage, reflecting the multi-dimensional nature of stratification. Differential association is affected by the relative status of the individuals involved, but distance measures also tap into the economic and material resources that underpin such interactions; however, social distance is not a measure of economic circumstances as such, since relationships of intimacy are also affected by cultural background, social networks, opportunity of access, and so forth. What the interaction space and the distances within it reveal is the way in which combinations of particular resources are *socially aggregated* into generalised advantage (Prandy, 2002: 1568). Like Bourdieu, SID approaches emphasise the indivisibly social, cultural and economic basis of social space. Rejecting the conventional division between class and status, the argument is that social interaction distance is governed by a variety of social, cultural and economic processes and can be regarded as a reflection of the generalized advantage and disadvantage which underpin such interactions. Interaction distance is treated as a social structure in its own right which, whilst reflecting the diverse influences – material, social and cultural – on association, is not reducible to any of them.

Quite different sets of relationships (friendship, marriage and family connection) have been see to exhibit the same social distance patterns, indicating a similar social hierarchy (Bottero & Prandy, 2003). This is taken as a sign that such diverse social relationships are embedded – and revealed – in a common underlying social

hierarchy or ordering. The implication is that the same stratification ordering constrains a variety of social relations and practices and that, conversely, a range of social relations can be used to identify this constraining structure.

In most approaches, occupation is used as the *tag* by which the social distance method locates an individual's place in the social hierarchy. Occupations are not seen as aspects of a prior economic structure which determines social identity and behaviour, but rather are viewed as integral elements of a space of relationships. The hierarchy of occupations is thus not given in their typical pay, skill or employment conditions but instead derives from the typical patterns of social relationships within which such occupations are located and take their social meaning. Using finely disaggregated occupational units, if differences in pay, skill or employment status are not reflected in typical patterns of social interaction, then occupations receive the same position in the social ordering, which measures general (rather than just labour market) advantage. The approach orders occupations in terms of the differences regarded as socially meaningful by the participants of stratification processes (as these emerge in interaction). This differs from objectivist approaches, which impose observers' categories and ordering criteria, nor is it subjectivist, since it is does not access subjects' perceptions of occupational prestige. Social distance scales map actual relations of intimacy, and therefore tap the social ordering of occupations as it is concretely embedded in social practice.

This multi-dimensional approach to stratification acknowledges the many, overlapping, influences on an individual's location in the social order. The first, major dimension of the space is taken in social distance approaches as a generalized social ordering, giving a one-dimensional scale of stratification position. Bourdieu insisted on a dis-aggregated two-dimensional model of the social space, in order to be able to identify differences in the level of different types of capital (1984a: 125). However, Bourdieu's model does not encompass levels of social capital and, whilst useful for *mapping* levels of economic and cultural capital, is less applicable as a *measure* of social position that can be used to explore other aspects of stratification. Social interaction scales, by contrast, are *measures* of interaction distance which emphasise the overall social position which results from access to multiple social resources.

11.3 Implementation

11.3.1 Occupation-Based SID Scales: The CAMSIS Approach

Occupational positions make convenient, practical *tags* for measuring an individual's position within a stratification structure. Other markers of positions within social space could feasibly be operationalised, however occupations are generally favoured in sociology as they are seen as relatively stable indicators (Stewart et al., 1980). Moreover occupational positions constitute convenient indicators, because

they are widely used in social science studies and are easily measured and recorded to national and international standardised schemes (Lambert et al., 2007).

Many projects have undertaken to calculate the social interaction distance between occupations in one format or another. Bourdieu himself used correspondence analysis to calculate distances between occupational 'class fractions' (1984a), incorporating some analyses of social interaction data (although his interpretation was different to that provided above). Other French analyses have also sought to define a structure of occupational positions on the basis of analysis of social distance (Bozon & Heran, 1989; Barral, Bellach, Bernard & Vaconsin, 2003). Outside France, alternative implementations of SID scales using occupational data include Laumann and Guttman (1966); Bakker (1993); and Chan and Goldthorpe (2004).

Perhaps the most systematic attempt to calculate and disseminate social interaction distance scales is associated with the 'Cambridge group' and their ongoing 'CAMSIS' project (Cambridge Social Interaction and Stratification Scales, see www.camsis.stir.ac.uk). This project involves obtaining data on social interaction patterns between occupations in different countries and time periods, and subsequently calculating social interaction distance scales for occupational positions. The products of these analyses are databases of occupational titles with associated 'scores' within the relevant SID scale. Other researchers are encouraged to access and use these scales as measures of social stratification positions.

The CAMSIS project has accessed micro-data from over 30 countries; approximately 200 different occupation-based SID scales are currently available to download from the CAMSIS web-pages, though new measures are calculated at regular intervals. Most of these 'CAMSIS scales' use data from the last two decades, though some specialist projects deal with occupational data from the eighteenth and nineteenth centuries (Prandy & Bottero, 1998).

A series of principles and instructions on implementing the calculation of occupation-based SID scales is laid out on the CAMSIS web-pages. In brief summary, the procedure involves generating a large bivariate cross-tabulation on the basis of data on pairs of occupations with social connections between them. A statistical analysis is then run on that cross-tabulation, which will calculate one or more dimension scores for the row and column categories in such a way as to maximise prediction of the observed patterns of social interaction between occupations. Correspondence analysis (Greenacre & Blasius, 1994) and Goodman's RC-II association models (Goodman, 1979) are ordinarily used for this purpose. These two methods are statistically equivalent in their calculations (Gilula & Haberman, 1988), although the way in which these analyses are undertaken in conventional statistical packages leads to certain operational differences between them.

For ease of exposition, Table 11.1 gives a schematic image of how the calculation of CAMSIS scale scores works on this basis. Detailed instructions on the methods used within the CAMSIS project are given on that project's website.

The key step in the scale construction process is that the row and column dimension scores (shown in italics in Table 11.1), which were calculated on the basis of social interaction patterns between occupational units, are then interpreted as indicators of the relevant occupation's position within the social space of social

Table 11.1 CAMSIS

			Husband's job units			
Occupational units ↓		→	1	2	..	407
Derived dimension scores			*75.0*	*70.0*	..	*10.0*
Wife's	1	*72.0*	30	15	..	0
job	2	*72.5*	13	170	..	1
units	..	..	..	..		..
	407	*11.0*	0	2	..	80

Selected examples of CAMSIS scores for Germany, 1991

	m	*f*		m	*f*
Gymnasium teacher	84.4	*87.1*	Cashier	53.8	45.9
Nursery teacher	61.4	*51.6*	Steel Smith	29.7	29.2
Specialist technician	48.3	*58.1*	Steel S. (employer)	43.7	62.3

Panel 1 denotes an abbreviated cross-tabulation of 407 different occupational positions for husbands and wives. The numbers in each cell are the number of empirical occurrences of each husband-wife combination. The derived scores help better predict those numbers of occurrences.

Panel 2 shows CAMSIS scale scores for occupations in Germany using data from 1991 (taken from www.camsis.stir.ac.uk/Data/Germany91.html). The score on the male and female scales is shown. Standardisation is such that a nationally representative population of men or women from Germany in 1991 should have mean 50, standard deviation 15.

interaction and stratification. Re-scaled versions of these scores are distributed as 'CAMSIS scales' from that project's web-pages.

The construction and dissemination of CAMSIS measures involves several further considerations. One important issue concerns the number of different scales that may be calculated. The CAMSIS analyses have calculated different scales for different countries and different time periods within countries. Different scales are also calculated for male and female occupational structures, on the argument that the same occupational titles display, empirically, different relative positions within the occupational structure of men and women respectively. Nevertheless, the relative positions assigned to different occupations prove to be highly correlated between different countries, time periods, and between men and women. Many specialists on occupational data have argued that for most practical purposes, occupational titles do not change in their relative positions between contexts, a position known as the 'Trieman constant' (Treiman, 1977; Hout & DiPrete, 2006). This tension is summarised as the difference between 'universal' and 'specific' approaches to occupation-based social classifications (Lambert et al. 2008). The CAMSIS project researchers argue that 'specific' measures should be pursued as they allow for the theoretical possibility of certain occupations having different relative positions across contexts, and because a specific approach is better suited to measuring certain particular occupational circumstance which do, empirically, show considerable variability in their relative positions (namely agricultural jobs, occupations in rapidly expanding

or contracting sectors, and jobs with high proportions of female workers, Lambert et al., 2008). Nevertheless, the position of 'specificity' advocated in the CAMSIS project should not *necessarily* be conflated with the SID approach.

A second important issue in the calculation of social interaction distance scales concerns the dimensionality of the empirical structure of social interaction patterns between the incumbents of occupations. In the CAMSIS project, it is argued that statistical analyses consistently reveal one core dimension which influences social interactions and is readily interpreted as the stratification space of social interaction. Empirically however, other dimensions of differences (between occupations) also influence social interaction patterns – indeed, this should be expected, given that other mechanisms than stratification affect the frequency of social interactions (cf. Kalmijn, 1998). Volume of social contact may be affected by geographical location, regional and institutional connections, and gender and ethnic occupational segregation. Examples include certain types of occupations in rural societies and institutionally driven social contacts between doctors and nurses.

The calculation of CAMSIS scale scores conventionally involves an interpretive phase whereby certain patterns and dimensions of occupational contacts may be excluded from contributing to the first dimensional score (these combinations are described as 'pseudo-diagonals' and 'subsidiary dimensions' on the CAMSIS web-pages, where techniques are discussed in further detail). However the argument of researchers on the CAMSIS project is that the core dimension of social space is, empirically, *a single hierarchical dimension of advantage and disadvantage*, a claim which is of some consequence to the interpretation of the structure of social space.

11.3.2 Using SID Scales

The empirical basis of SID scales means that new scales may be readily generated for new contexts (such as countries and time periods) whenever they may be required. However, the methods described above for calculating SID scales require a complex series of sequential tasks in data analysis and data construction which cannot easily be automated. These methods have hitherto only been successfully implemented in a small number of coordinated research projects (aside from the CAMSIS project, see also Chan & Goldthorpe, 2004). Therefore, attempts to exploit SID scales usually rely on existing scales already having been created for the relevant context. A searchable database of many SID scales based upon occupations, including those from outside the CAMSIS project, is maintained at a specialist website for accessing occupational data known as 'GEODE' (see www.geode.stir.ac.uk).

Whilst the calculation of social interaction distance scales may appear complex, the empirical analysis of occupations on the basis of SID scales is straightforward. SID scales define scores for occupational units. Those scores are interpreted as measures of the average position of the incumbents of those occupations within the

social structure of stratification. Those scores may be used in empirical analyses as outcome or explanatory variables measuring position in the social structure, following the standard approaches adopted in the use of occupation-based social classifications. Validation studies have shown that social interaction distance scales have many attractive properties as occupation-based social classifications, representing parsimonious measures of stratification that prove empirically favourable in many circumstances (Stewart et al., 1980; Prandy, 1998; Chan & Goldthorpe, 2004, 2007b; Lambert & Bihagen, 2007).

CAMSIS scale scores are available to download by a researcher who may then perform a data programming exercise in order to link together with their own data files (instructions are given on the CAMSIS web-pages). Moreover, because the CAMSIS scales are a family of 'specific' scales for different countries, time periods, and for men and women, in many circumstances a researcher may be expected to perform this downloading and linkage exercise several times over, for multiple different scales. One potential support resource in this domain is available through a file linking program developed as part of the 'GEODE' project (Lambert et al., 2007). This site includes search facilities for locating relevant scale scores (and other data on occupations), and it includes pre-programmed routines to facilitate matching between researchers' own data files and specialist databases on occupations. The GEODE resource may offer an avenue to the easier practical exploitation of SID scale measures in the quantitative analysis of social science data.

11.4 Conclusion

Social interaction distance scales offer a bridge between data on occupations, and measures of position within a structure of social stratification. Bourdieu exploited data on occupations in numerous publications, but adopted a pragmatic approach to recording and describing data, using standard categorisations, such as the dominant French 'PCS' classification, according to availability. Further, the uniquely French aspects of the PCS scheme, and the difficulty of connecting French statistical traditions in occupational analysis with other nations' traditions (cf. Lemel, 2002) may have compounded a lack of standardisation in the use of occupational data in Bourdieusian writing.

There are numerous occupation-based tools which may be used for analysing the social structure, but social interaction distance scales make particularly convenient measures for Bourdieusian analyses. Whilst never specifically advocated by Bourdieu, our assertion is that social interaction distance scales are Bourdieusian because they measure systems, and emphasise structures, which are consistent with Bourdieu's approaches to understanding society. In the spirit of supporting empirical analyses of quantitative data which engages with ideas from Bourdieu, we argue that occupation-based social interaction distance measures are an accessible, robust indicator of position within the social structure which may be given a Bourdieusian interpretation.

Chapter 12
Women's Work and Cultural Reproduction: An Analysis of Non-Wage Labour in Central Ontario, 1861

Heather L. Garrett

Abstract During the mid-nineteenth century, decisions were often made by married women regarding family strategies and the best use of the resources available to them for the cultural reproduction of the habitus of their families. One strategy that not only enabled women to work within the home but also enabled them to help supplement the family economy was the taking in of boarders. Using Bourdieu's theory of cultural reproduction as an analytic framework it will be argued that boarding was one of many different variations on a continuum of women's work. A sample from manuscript sources of 4,959 married women aged 15 and older who lived in central Ontario is studied to ascertain what kinds of women took in boarders. Urban-rural and ethno-religious differences are explored by comparing married women who accommodated others in the home to those who did not. This analysis broadens our understanding of family structure, family strategies, cultural reproduction and urban-rural and ethno-religious differences in women's contributions to the family economy.

12.1 Introduction

Abrams (1982) defines an event in terms of the transition it denotes when action and structure meet by stressing the importance of how social action is structured in time. Such an event or series of related events occurred during the early stages of industrial capitalism in urbanizing North America with the separation of the workplace and the home. Although there were variations by region, the family economy of the mid-nineteenth century skilled labour and farm families increasingly began to rely on the paid labour of different family members. Many women found it necessary to contribute to the family economy by working outside of the home for

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wages during this period, however, the practice was very uncommon for married women. This made it necessary for women to employ different techniques to contribute to the family economy such as taking in boarders. In this chapter, the main research question, based on Bourdieu's concept of cultural reproduction is, how do married women contribute to the cultural reproduction of the family economy in the mid nineteenth century?

Women who work in the labour force provide cultural capital for their families. During this time period, however, it has been found that due to doctrines of masculinity and femininity and dominant ideologies within the working classes of the family wage or middle and upper classes of self-made men and true women, very few married women can be found in the census as engaged in wage labour. According to middle-class ideology of the time, the main role of the women in families was to be the *makers* of men. Thus, women reproduced the family enterprise not only by looking after the needs of boarders as well as the apprentices, pupils and shop men who worked with their husbands but also by preparing meals, doing laundry, and keeping their rooms clean and tidy. Furthermore, by overseeing the emotional and moral development of future members of the family enterprise, this labour is operationalized as providing for the cultural capital and habitus necessary for the cultural reproduction of the family and society at this time.

Cultural reproduction which results in social reproduction or the transmission of various aspects of society (habitus) from generation to generation was developed by Pierre Bourdieu in his analysis of the education system in the 1970s and in his theory of practice (Bourdieu, 1973, 1977; Bourdieu & Passeron, 1979, 1990). The concept was originally applied to show how the education system is used by the dominant class to reproduce their culture and thus maintain power, dominance and control over the working class. It has been used by sociologists and historians in attempts to disentangle the agency/structure dualism (Jenks, 1993). It is a useful analytic tool which can be applied to the work that women do in the family economy.

According to Bourdieu, children from the dominant class have internalized the practices of the dominant culture since early childhood. The reproduction of the dominant culture occurs subtly through the education system and familial socialization that provides not only the appropriate level of cultural capital but also the right kind. Bourdieu's concept of *habitus* is closely tied to his analysis of socialization and cultural reproduction. The habitus consists of an individual's taken-for-granted knowledge and understanding of the world, which in turn makes a separate contribution to that world. The habitus tends to be fixed, but the dispositions which make it up can change from generation to generation and through time for an individual. Thus, the material and social conditions of society will have an impact on the socialization practices of families. Because the socialization practices are affected by material conditions, they will tend to reproduce those conditions. Thus habitus acts as a mediating or bridging mechanism between individual action and social structures.

Boarding can be considered to be a survival based cultural reproduction strategy used by women in the family to attain another source of household income which

could either be used in the daily running of the household or saved for future use in order to maintain the family economy. Taking in boarders or sharing household space can also be considered to be a cultural reproduction strategy adopted by women in order to enhance material conditions or maintain family status and improve children's educational and job opportunities. For example, Davidoff and Hall (1987) and Ryan (1981) have used the concept of cultural reproduction in their studies on the middle class suggesting that families engage in income-producing strategies because they are trying to maintain or enhance their position in society.

Boarding can be considered as an alternative to working for wages because it not only enabled women to work within the home but also enabled them to contribute to the material conditions of the family which, as Bourdieu argues, play a role in the reproduction of the habitus of the family. Although families of all classes took in boarders, prior research suggests that boarding was more common among native-born women whose husbands were professionals, skilled labourers or non-working-class members who owned their own shop or farm enterprises, and had larger homes (Bradbury, 1984, 1993; Ryan, 1981). Domestic services provided for boarders such as cleaning, cooking, washing, and sewing were not as likely to be undertaken by the families of labourers because the costs in terms of extra work and resources necessary for such a strategy far exceeded the benefits. Boarders had to be fed, and provided with a separate room, a bed, sheets and blankets. The resources which were necessary to support boarders were usually available in larger middle-class homes. The argument that wealthier families had more space and resources or as Bourdieu would argue 'economic capital' to house boarders is also addressed in other studies of Canadian and American cities (Gagan, 1981; Haines, 1981; Katz, 1975). For example, Gagan argues that a large domestic establishment consisting of relatives, lodgers, and servants acted as a surrogate for social status.

In this chapter, I will provide an illustration of how I operationalize Bourdieu's concept of cultural reproduction which leads to social reproduction by providing evidence of the wage work women do in the labour force and the non-wage work women do in family enterprises by taking care of boarders and others in the home in urban and rural areas of Central Ontario in 1861. In this analysis it is assumed women *directly* play a key role in the reproduction of the habitus of the members of their families by working in the wage labour force and *indirectly* by caring for others in the family enterprise. It is also assumed that the hidden, non-wage work done by women in family enterprises, operationalized as managing the household and all of its members including boarders, apprentices and farm hands can be viewed as a useful extension of Bourdieu's concept of cultural reproduction as previous studies have demonstrated that it is the women in family enterprises who take over the commercial, intellectual and spiritual development of young apprentices and farm labourers. The main hypothesis to be tested is that married women are more likely to engage in the cultural reproduction strategy of working in the family enterprise than working for wage labour. Given that many children did not attend school in Ontario during 1861, it is argued that cultural reproduction of the habitus necessarily took place within the home in the family enterprise.

This research is based on preliminary work from one small part of a study of women's work and the family economy for a large region of central Ontario for 1861 and 1871, employing an existing database of census manuscript records. I will focus on taking in boarders. First, I will briefly discuss the data upon which this study is based. Findings on married women's labour force participation and boarding in central Ontario in 1861 will then be discussed. I will then focus on ethnic differences for a sample of married women who have boarders, family, and/or others in the household and offer closing remarks.

12.2 The Census Data

The study covers a large region of central Ontario based on samples from the nominal data of the 1861 census manuscripts. The area represents about half of the provincial population in this decade and consists of counties on the west from the middle of Lake Erie to the lower shore of Lake Huron and from about Port Hope to the southern tip of Georgian Bay to the east. Populations of all cities, towns, villages, and rural areas are included as well as Hamilton and Toronto, two of Ontario's major industrializing cities. The data are from a second phase of the Canadian Historical Mobility Project. In the first phase, a representative national sample of households was created using data transcribed from the four provinces in the 1871 Federal Census of Canada.

The second phase, or Ontario Phase, is based on record linkage of large samples of individuals drawn from the census manuscripts of 1861 and 1871. The letter samples are clusters of surnames which allow the probability samples to be linked and permit the tracing of individuals between the two censuses. Records for the individuals were created which include all household information, farm tenancy and production, and the data of the manufacturing schedule in 1861. In 1861, the personal schedule is supplemented by the separate agricultural schedule. In the Ontario Phase, all of the information from these schedules was recorded for *every* member of the household in order to enable analyses of individuals within their family or household context. This is of particular importance for this study of boarding as the contextual information provides the basis for coding extended and augmented household structures. In previous publications, it has been documented that the samples are representative of the enumerated population for 1861 and 1871 (Darroch & Ornstein, 1984a, b; Darroch, 1988). The cross-sectional data consists of 9,815 women over age 15 for 1861. The current study focuses on a subsample of 4,959 married women whose spouse is listed as the head of the household.

12.3 Data Analysis and Discussion

Very few married women are listed as having occupations in 1861. Of the 9.5% of married women who worked, 8% were listed as merchants, professionals, or white collar workers, 13% were listed as skilled labourers, 21% were listed as semi-skilled

workers or labourers, 4% were listed as domestics and 53% were listed as farmers. Of these women only two are actually listed as keeping boarders or running a boarding house. Part of the reason for the lack of recording of boarding in the census is due to definitions of productive and non-productive labour used by enumerators (Abel & Folbre, 1990). Another reason is that there was a lack of respectability associated with having strangers in the home (Harris, 1992).

At first glance, it might appear that the hypothesis that married women are more likely to engage in the cultural reproduction strategy of working in the family enterprise than working for wage labour has not been supported. Further analysis of the variable boarding as an indicator of cultural reproduction, however, reveals that this may not be the correct interpretation. Because so few of the women were listed as taking in boarders, estimates were made by manually coding each household where the last name of one or more individuals in the household differed from the last name of the household head.

In the following analysis boarders are defined as single, widowed, or married persons whose spouse was not present with a different last name than the head. Individuals age 54 or over and age 12 and under were deleted from the boarder category and placed in their own category based on Doucet's (1977) research on the boarder/relative problem. Other family structures were also coded for purposes of comparison such as extended family members, co-residing extended families, unrelated co-residing families, and what I have come to call *unrelated fragment families*. The latter group consists of two or more individuals with the same last name who could be brothers and sisters or other members of the same family.

Analyses of occupation show that 38% of the married women who were not listed as working had *others* present in the household, compared to 53% of married women in merchant, professional, and white collar occupations, 46% in farming, 36% in domestic service, 35% in skilled labour positions, and 23% in semi-skilled or labourer jobs. Thus married women who were merchants, professionals, and white collar workers and farmers were respectively 15% and 8% more likely to have others present than married women with no occupation while married women who were semi-skilled workers or labourers were 15% less likely to have others present in the household ($\chi^2 = 18.565$, 5 *df*, $p = .002$). These findings based on the revised operationalization of estimates of boarding provide support for the hypothesis that married women are more likely to engage in the cultural reproduction strategy of working in the family enterprise by caring for others in the household than to work in the paid labour force.

Other interesting results were found when occupation was crosstabulated with presence of boarders. Of the married women who were not listed as working, 22% had *boarders* present in the household, compared to 38% of married women in merchant, professional, and white collar occupations, 28% in artisanal occupations, 27% in domestic service, 24% in farming, and 13% in semi-skilled or labourer occupations. Again, married women who were merchants, professionals, and white collar workers were 15% more likely to have boarders present than married women with no occupation, while married women who were semi-skilled workers or labourers were 10% less likely to have boarders present in the household ($\chi^2 = 11.144$, 5 *df*, $p = .049$). Although caution must be used when interpreting

these results as the n's are very small, it appears that the support may be related to variations in strategies women use to manage the family economy.

Finally, the findings also show that 37% of the women with no servants had others present in the household whereas 51% of the women with servants had others present in the household. Thus women who had servants in the household were 14% more likely to have others in the household than women who did not have servants (χ^2 = 23.351, 1 *df*, p = .001). This lends support to Bourdieu's theory that the material conditions of a family tend to be reproduced. Similarly, 21% of the women with no servants had boarders present in the household while 35% of the women with servants had boarders present in the household. These findings show that married women who had servants in the household were 14% more likely to have boarders in the household than those who did not have servants (χ^2 = 30.705, 1 *df*, p = 0.001).

12.4 Ethnic Differences

In the following tables, *Extended Family* or *Family* includes extended family members and co-residing extended families; *Others* includes unrelated co-residing families, unrelated fragment families, and unrelated individuals age 12 and under or age 54 and over; and *Boarders* includes unrelated single, widowed, or married persons whose spouse was not present. Before looking at Type of Other and ethnic background, the univariate frequencies for Type of Other and ethnic background analyzed in Tables 12.1 and 12.2, should be noted. Of all married women, 62% had no unrelated others or extended family members present in the household. Of the remaining 38%, 5% had extended family only, 10% had a combination of extended family and unrelated others, about 15.5% had boarders only, and almost 7% had a combination of boarders, extended family, and unrelated others. If boarders only

Table 12.1 Other by ethnic category[a] in percentages for married women for central Ontario, 1861 *(Surname samples, Central Ontario region)*

	Ethnic categories (ethno-religious for Irish), 1861					
Type of other	Canadian	British	Scottish	Irish Catholic	Irish Protestant	Other
No others or family	54.49	64.38	63.58	73.17	62.07	62.62
Extended family only	6.59	4.38	5.82	3.56	4.26	5.12
Family and others	9.43	10.88	10.13	9.22	11.78	11.39
Boarders only	20.36	15.63	14.22	9.22	14.81	13.09
Boarders, family and others	9.13	4.75	6.25	4.82	7.07	7.78
Total %	100.00	100.00	100.00	100.00	100.00	100.00
Total N	1,336	800	928	477	891	527

[a]Other = United States, Germany, France, other European, and other non-European. χ^2 = 92.124, 20 *df*, p = 0.001.

Table 12.2 Boarders by birthplace in percentages for married women in central Ontario, 1861 (Surname samples, Central Ontario region)

	Birthplace, 1861	
Number of boarders	Canadian born	Foreign born
1	66.50	73.10
2	23.86	17.93
3+	9.64	8.97
Total %	100.00	100.00
Total N	725	394

$\chi^2 = 6.181$, 2 *df*, $p = 0.045$.

and some combination of boarders, family, and unrelated others are added together, boarders can be found in 22.5% of all married women's households. These results are similar to Modell and Hareven's (1973) estimate that the percentage of households containing boarders was between 15% and 20%. The distinction between boarders only and some combination of boarders and others is of importance as will be seen when ethnic differences are compared.

Of all married women (n = 4,959), 27% were born in Canada, compared to 28% born in Ireland, 19% born in Scotland, and 16% born in Britain. The remaining 10% of married women were born in the United States, Germany, France, and other European and non-European countries. In terms of religious background (not in tabular form) 82% were Protestant, 13% were Catholic, and 4% were listed as Other religious backgrounds. In the analysis presented in Table 12.1, the percentage of Irish Catholics was 10 and the percentage of Irish Protestants was 18.

In Table 12.1, Canadian-born married women were the most likely to have others of any type present in the household as the percentage of the women with no others or extended family is 54.5%. The percentage difference between Canadian-born married women and Irish Catholic married women, who were the least likely to have others present in the household, is 18% as 73% of Irish Catholics had no others or extended family present in the household. Thus slightly fewer than one half of the Canadian-born women had others living with them compared to slightly over one quarter of Irish Catholic women. For British, Scottish, Irish Protestant, and Other Foreign-born married women, the percentages of having any type of other in the household range between 35% and 38%. The latter percentage is for Irish Protestants who were the second most likely to have any type of other in the household.

Canadian-born married women were also the most likely to have extended family living with them and Irish Catholics were the least likely. While Irish Protestant married women were one of the least likely of the ethnic groups to have extended family, they were the most likely to have a combination of extended family members and others in the household. Irish Catholic married women were also the least likely to have a combination of extended family members, followed by Canadian-born married women.

In terms of boarding, 20% of married Canadian-born women had boarders only. Once again, the least likely were the Irish Catholic women where the percentage

difference was 11%. The other four groups range between 13%, for Other Foreign-born and 15% for British-born. Although the British-born married women were the second most likely to have boarders, the table shows that they were also the least likely to have a combination of boarders, extended family, and others. They were, however, followed closely by Irish Catholic women. Not surprisingly we also find that Canadian-born women were the most likely to have a combination of boarders, extended family, and others.

The findings that Canadian married women had boarders and others living with them is very similar to Ryan's (1981) finding that one in four native-born middle-class women had boarders. Moreover, it also provides evidence to support the argument that this is one way married women in families reproduce cultural capital. Having described the ethnic differences for the whole sample of married women it is now possible to look more specifically at the number of boarders married women had. Because Canadian-born women were the most likely to have boarders, they are compared to all other Foreign-born women in the next analysis.

I now turn to Table 12.2, which focuses on the 1,119 women in the sample of married women with boarders present in the household. Of all women with boarders, 71% had one, 20% had two boarders, and 9% had three or more boarders. Foreign-born married women were 6% more likely to have only one boarder than Canadian-born married women. On the other hand, Canadian born women were more likely to have two boarders than the Foreign-born women. There is very little difference between Canadian-born and Foreign-born married women with three or more boarders.

Based on these findings, it could be argued that both the Foreign-born and Canadian-born families are engaging in an income producing survival strategy reproducing their material conditions. Evidence that the Canadian-born married women are more likely than Foreign-born married women to take in more than one boarder provides further support for the main hypothesis of this research. Based on the assumptions noted at the beginning of this analysis, this finding in turn provides support for Bourdieu's theory that the indirect work women do in the family enterprise when they take boarders into their home and/or care for others, culturally reproduces various aspects of the habitus from generation to generation. The strategy of caring for others in the home used by the dominant class, the Canadian born, reproduces their culture and thus maintains their power.

12.5 Concluding Remarks

Throughout this chapter it has been argued that Bourdieu's concept of cultural reproduction can be operationalized in terms of married women's participation in wage labour and non-wage labour, specifically, caring for others in the family enterprise by taking in boarders. The main hypothesis that married women are more likely to engage in the social reproduction strategy of working in the family enterprise than working for wage labour has been supported. In mid-nineteenth century

Ontario, children did not attend school to the same extent that they did in later decades, therefore it was necessary for cultural reproduction to take place within the home rather than in the education system as Bourdieu originally theorized. According to Bourdieu's argument, however, the reproduction of the habitus of the dominant culture also occurs subtly through familial socialization. It has been argued that married women who worked for wages provided their families with the material conditions necessary for the reproduction of the dominant culture, yet as the results demonstrated, only 9.5% of married women worked for wages. By caring for others such as boarders within the home, not only did women have the ability to provide the material conditions necessary to reproduce those conditions but also the social conditions.

A limitation of this research may be that Bourdieu's concept of cultural reproduction has been applied to historical data when it was developed in the 1970s. The test of a theoretical framework, however, is whether it can be applied to many different situations and contexts. The concept of cultural reproduction should therefore not be limited to the time period Bourdieu wrote. Recognizing boarding as a cultural reproduction strategy is critical to furthering our understanding of the principle role that women played in the family economy during the emergence of industrial capitalism in central Ontario.

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Chapter 13
Quantifying Social Class: A Latent Clustering Approach*

Nathan D. Martin

Abstract Bourdieu offers a model of social class that emphasizes class boundaries as the product of "classification struggles" within the various fields that comprise social space. The set of relations that define a particular field influence which social, economic and cultural resources are important in sorting individuals into class categories. Unfortunately, quantitative research has underappreciated the role of social class to Bourdieu's broader theory. In this chapter, I present results from latent clustering analysis (LCA) of student background characteristics to describe the underlying class structure of an elite academic field: American selective colleges and universities. LCA allows consideration of Bourdieu's multidimensional view of social class, and can be particularly useful for distinguishing groups within the broad dominant and lower classes. Additionally, LCA provides a test of Bourdieu's contention that the objective foundation to social class can be mapped along economic and cultural axes. After considering how social class influences academic achievement and post-graduation plans, I discuss the broader implications of class background to Bourdieu's theory of social and cultural reproduction.

13.1 Introduction

Bourdieu borrowed generously from the classic sociological cannon to develop his model of social class (Swartz, 1997: 142–188; Weininger, 2005). Firstly, Bourdieu (1984a) modifies and unites Weber's concepts of class and status by arguing

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that classes take on the appearance of status groups through social action. Defining class more broadly than Marxian theories, Bourdieu integrates cultural tastes and lifestyles into his class framework. Additionally, Bourdieu is less concerned than Marxian and Weberian approaches with defining objective class boundaries a priori. Instead, it is the set of relations that define a particular field that influence which social, economic and cultural resources are important in sorting individuals into class categories. In this manner, Bourdieu (p. 106) offers a 'constructed' view of social class that emphasizes class boundaries as the product of "classification struggles" within the various fields that comprise social space:

> Social class is not defined by a property (not even the most determinant one, such as the volume and composition of capital) nor by a collection of properties (of sex, age, social origin, ethnic origin – proportion of blacks and whites, for example, or natives and immigrants – income, educational level, etc.), nor even by a chain of properties strung out from a fundamental property (position in the relations of production) in a relation of cause and effect, conditioner and conditioned; but by the structure of relations between all the pertinent properties which gives its specific value to each of them and to the effects they exert on practices.

In advanced capitalist societies, the economic dimension to class predominates, although cultural properties serve to reinforce class boundaries and create status distinctions within broad class categories (Lamont & Fournier, 1992).

Unfortunately, quantitative research has underappreciated the role of social class to Bourdieu's broader theory. In this chapter, I present results from latent clustering analysis (LCA) of student background characteristics to describe the underlying class structure of an elite academic field: American selective colleges and universities. LCA allows consideration of Bourdieu's multidimensional view of social class, and can be particularly useful for distinguishing groups within the broad dominant and lower classes. Additionally, LCA provides a test of Bourdieu's contention that the objective foundation to social class can be mapped along economic and cultural axes. After considering how social class influences academic achievement and post-graduation plans, I discuss the broader implications of class background to Bourdieu's theory of social and cultural reproduction.

13.2 Bourdieu's Social Classes and Latent Clustering Analysis

Bourdieu's theoretical notions of cultural capital and habitus are key to his understanding of social class. Bourdieu (1986) extends the idea of capital to include all forms of power, taking the primary forms of economic, social and cultural capital. While economic capital can be directly converted into material advantages, symbolic resources such as cultural capital may also be converted into economic capital. The notion of cultural capital is among Bourdieu's most popular contributions to American sociology (Sallaz & Zavisca, 2007), even as it has often been used in a limiting, if not inappropriate, manner (Lamont & Lareau, 1988).

Social class is put into practice – in the competition over capitals – by way of habitus. Habitus may be understood as the set of cumulative life experiences that guide perceptions of and future responses to the social world; the habitus simultaneously structures and is structured by objective social class divisions (Bourdieu, 1984a: 171). While it is possible for any individual, for example, to adopt the cultural practices of the "dominant" classes, in practice individual action tends to conform to others from similar class backgrounds (Bourdieu & Wacquant, 1992: 120–140). Empirically, the shared class habitus may be observed as the corresponding set of aspirations (Dumais, 2002), cultural preferences (Bourdieu) and choices (Reay, David, & Bell, 2005) associated with particular backgrounds. An important aspect of a dominant class habitus is the ability to locate and appropriate cultural capital.

Bourdieu's theoretical concepts come together to provide an explanation for how student's class background contributes to processes of cultural and social reproduction. Since cultural capital is often highly associated with but not necessarily caused by economic capital, the educational system can reinforce the stratification system by rewarding the habitus and cultural capital of dominant class students. Thus, schools can appear to operate as meritocracies when in fact they advantage the dispositions and practices of social elites (Bourdieu & Passeron, 1990). In his study of the French society and educational system, Bourdieu finds that "highbrow" cultural preferences serve as especially salient manifestations of the dominant class habitus. In the American context, examples include not only musical or artistic tastes (Beisel, 1990), but also having a wide breadth of cultural competencies (Alderson, Junisbai, & Heacock, 2007; Peterson & Kern, 1996) and strong family-school ties (Lareau, 2000).

Much sociological research has applied Bourdieu's theory to studies of academic achievement and attainment. However, the quantitative literature has shown two tendencies: a disproportionate focus on the effects of cultural capital – operationalized as "highbrow" experiences – and a reliance on the status-attainment framework (e.g., DiMaggio & Mohr, 1985; Roscigno & Ainsworth-Darnell, 1999). This approach not only neglects key aspects of Bourdieu's theory, but also differs from Bourdieu's own methodological approach, as he eschewed regression analysis (Lareau & Weininger, 2003; Swartz, 1997: 162). Still, in his studies of the French educational system, Bourdieu considers students' social class only in broad, conventional categories based on parent's occupation (e.g., Bourdieu & Passeron, 1990).

As an improvement, I propose the use of latent clustering analysis (LCA) (e.g., Alderson et al., 2007; Birkelund, Goodman, & Rose, 1996). LCA provides an opportunity to more fully appreciate Bourdieu's dynamic understanding of social class with a sophisticated statistical method. To simplify, LCA explores if the association between a set of observed or manifest variables can be explained in terms of a latent variable. Typically, one starts with an independence (one-class) model and, if this is not shown to explain the association between the observed indicators, one then fits a model with $T = 2, \ldots, n$ classes until arriving at a solution that reveals adequate model fit. Conventional criteria, such as the chi-squared statistic, can be

used to assess how well the model fits the data. Finally, based on the preferred solution (i.e., the most parsimonious model that has acceptable fit), one then assigns each individual to the latent class to which they are observed to have the highest probability of belonging.

LCA is an appropriate method for incorporating Bourdieu's notion of social class into quantitative research for three primary reasons. First, LCA is consistent with Bourdieu's concern with relating theory and empirical data. While emphasizing the subjective nature of social processes, in his research Bourdieu shows a preference for statistics over qualitative accounts (Swartz, 1997: 52–64). LCA is probability-based, drawing inferences about the underlying structure through examination of manifest distributions. Issues regarding the number, size and composition of classes are not fully assumed by the investigator, but instead determined by the observed associations between variables. Second, not only does Bourdieu differ from Marxian notions of class by emphasizing amorphous class boundaries, but also by giving considerable emphasis to groups within the dominant classes. While members of the dominant class are similar in respect to possessing large volumes of capital, within this broad category exist factions distinguished by their relative distribution of economic and cultural resources (Bourdieu, 1973, 1984a). LCA could differentiate meaningful class factions within the dominant class by exploring associations across a range of socioeconomic characteristics.

Finally, LCA is particularly well-suited for answering research questions that seek to distinguish groups based on unobservable characteristics (Land, McCall, & Nagin, 1996). By sharing a similar relationship to social structure – and a similar constellation of material and symbolic resources – individuals are considered to develop a class habitus. Habitus is too complex to be reduced to a single quantitative variable, but insufficient attention has been given to the influence of social class in Bourdieu's theory. LCA can help distinguish class factions positioned along cultural and economic axes that exist within broad occupational categories, and can allow greater consideration of Bourdieu's notion of social class – and its relation to cultural capital and habitus – with quantitative methods.

13.3 Data and Variables

To examine the underlying class structure of American selective colleges and universities, this analysis uses data from the *Campus Life and Learning* (CLL) project – a panel study of two consecutive cohorts of students attending Duke University in Durham, North Carolina – and the *Cooperative Institutional Research Program* (CIRP), which conducts extensive surveys of students attending US institutions of higher education. While the CLL provides a rich, detailed portrait of students attending a single elite university, the CIRP offers many comparable survey items for a national sample. Together, these data allow a sociological examination of elites within selective academic fields.

The *Campus Life and Learning* (CLL) project is a multi-year, prospective panel study of the incoming classes of 2001 and 2002 attending a private research

university. Based upon the students' self-reported racial ethnic status on the admissions application form, the design randomly sampled roughly one-third of white, two-thirds of Asian and about one-third of bi/multiracial students, and all black and Latino students. Students were surveyed first in the summer preceding matriculation and again during the spring semesters of their first, second and fourth college years. This analysis includes students who responded to the pre-college survey, provided access to their institutional records, and were not missing on key demographic variables (n = 1,180), which represents nearly 77% of all sample members. For a more detailed description of the CLL, see Spenner, Buchmann and Landerman (2005).

The *Cooperative Institutional Research Program* (CIRP) has collected extensive data of American higher education since 1966. The annual Freshman Survey is administered during the first few weeks of classes to students at over 650 institutions of higher education, including community colleges and 4-year colleges or universities (from a population of about nearly 2,700 institutions). A smaller set of post-secondary institutions also administers the College Years Survey to their student populations. Present analysis uses data from the most recent cohort of graduates from selective colleges and universities available through CIRP. The sample is restricted to full-time students who: first entered college in 1999, were attending the same institution in the spring of 2003, were enrolled in highly selective private colleges or universities (average SAT score of at least 1,300; see Bowen and Bok [1998: 337]), and completed both the Freshman Survey and, in their fourth year, the College Years Survey (n = 3,286). For a more detailed description of the CIRP, see Astin (1993) and Sax, Astin, Korn, and Mahoney (1999).

The CLL and the CIRP each contain a range of equivalent measures of student socioeconomic background and demographic characteristics. While the two datasets are generally comparable in terms of socioeconomic background, a few differences are notable. The racial ethnic composition of the Duke University student body is more diverse than the CIRP sample, though it is similar to other selective colleges and universities (Bowen & Bok, 1998; Massey, Charles, Lundy, & Fischer, 2003).[1] Also, on average students in the CLL come from slightly more highly educated and more affluent households than the CIRP. Yet, both samples are considerably more advantaged than the national population of postsecondary students (Sax et al., 1999), and US households at large. For example, the average student-reported household income for the CIRP (US$117,000/year) and the CLL ($205,000/year) fall beyond the 90th and 95th percentiles, respectively, of the US household income distribution (DeNavas-Walt & Cleveland, 2002), and the average socioeconomic

[1] Student race/ethnicity was gathered from US Census-type questions that measure whether or not the respondent is Hispanic as well as racial/ethnic identification (White, Black, American Indian, Pacific Islander, Asian, other). For the CLL, if data were missing from the Pre-College Survey, admissions data were used when possible. For the CIRP, students' race/ethnicity was considered from the responses to the Freshmen Year Survey, or College Years Survey if missing. The "other" category for the CLL includes students who identified as bi- or multiracial, which was not an option on the CIRP surveys. Virtually all respondents who self-identified as Hispanic listed racial categories other than Black; accordingly, these cases were assigned to the Latino group.

status scores for mothers and fathers in both datasets are over one standard deviation above the national mean (Hauser & Warren, 1997).

For the latent clustering analysis to follow, the two datasets provide an identical set of student background variables. *Parent's education* is the level of educational attainment of the student's more highly educated parent, with three categories: less than a college degree, college graduate and graduate/professional degree. *Parent's SEI* is the occupational status score, with four categories ranging from below the US mean to more than two standard deviations above the national mean. As with parent's education, occupational status is coded as the higher of the two scores, if available for both parents. *Business ownership* indicates if either of the student's parents was a business owner or proprietor. Finally, *household income* is the student reported, pre-tax household income from the student's senior year in high school, with five categories ranging from less than $20,000/year to $200,000/year or more. All analysis with the CLL data use probability weights to reflect the over-sampling of racial ethnic minority students. LCA was performed using *Latent Gold 4.0* (Statistical Innovations, 2005).

13.4 Results

Tables 13.1 and 13.2 provide summary statistics for the LCA models for each dataset. Each table describes models with one to six classes, using the four student socioeconomic indicators discussed above. The chi-square statistic L^2 (and the associated p-value) assesses how well the model fits the data, testing the null-hypothesis that the specified model is true. Also, the log-likelihood BIC statistic (BIC_{LL}) provides another assessment of model fit, and may be more accurate in situations where data are sparse (Hagenaars & McCutcheon, 2002). In general, improvement to model fit is demonstrated by a reduction to the values of L^2 and BIC_{LL}.

For both the CLL and CIRP, the five-class model is shown to be the preferred solution and is the most parsimonious model that provides adequate fit. For the CLL (Table 13.1), the two-, three-, and four-class solutions all result in reductions to the chi-square statistic L^2 but fail to meet the standard criterion ($p < 0.05$) and

Table 13.1 Latent class models fitted to student socioeconomic background variables, *Campus Life and Learning*

Models	BIC_{LL}	L^2	df	p-value	% Reduction in L^2
1. Class	9407.755	995.675	109	0.000	0.0
2. Class	8945.457	455.571	98	0.000	54.2
3. Class	8760.729	193.038	87	0.000	80.6
4. Class	8756.723	111.226	76	0.005	88.8
5. Class	8789.982	66.678	65	0.420	93.3
6. Class	8853.109	51.999	54	0.550	94.8

Table 13.2 Latent class models fitted to student socioeconomic background variables, *Cooperative Institutional Research Program*

Models	BIC_{LL}	L^2	df	*p*-value	% Reduction in L^2
1. Class	27,001.136	2,982.849	109	0.000	0.0
2. Class	25,676.236	1,568.877	98	0.000	47.4
3. Class	24,693.385	496.954	87	0.000	83.3
4. Class	24,465.412	179.910	76	0.000	94.0
5. Class	24,461.083	86.509	65	0.039	97.1
6. Class	24,527.023	63.377	54	0.180	97.9

Table 13.3 Relative size of latent classes and conditional probabilities of being in each response category, *Campus Life and Learning*

		Professionals	Executives	Upper-middle class	Middle classes	Working classes
Class size		0.390	0.181	0.227	0.135	0.067
Parent's education	Less than college degree	0.000	0.000	0.022	0.273	0.570
	College degree	0.016	0.238	0.394	0.370	0.342
	Graduate degree	0.984	0.762	0.584	0.357	0.088
Parent's SEI	Below US mean	0.021	0.000	0.002	0.000	0.589
	US mean to +1SD	0.043	0.751	0.006	0.916	0.109
	+1SD to +2SD	0.138	0.132	0.964	0.067	0.294
	+2SD or more	0.798	0.117	0.027	0.017	0.007
Household income	$19,999/year or less	0.023	0.014	0.012	0.021	0.169
	$20,000–$49,999/year	0.013	0.015	0.114	0.287	0.411
	$50,000–$99,999/year	0.121	0.016	0.281	0.435	0.315
	$100,00–$199,999/year	0.310	0.403	0.427	0.216	0.026
	200,000/year or more	0.533	0.552	0.165	0.042	0.079
Business ownership	Yes	0.012	0.833	0.149	0.453	0.001

thus do not appear to fit the data satisfactorily. Also, the six-class solution provides little additional reduction in L^2 compared to the five-class model. Similarly, for the CIRP (Table 13.2), each subsequent model provides improved model fit, although the five-class solution is preferred. Even though the six-class solution appears to fit the data satisfactorily, the five-class solution is more parsimonious and has a lower BIC_{LL} value.

Table 13.3 describes the profile of the five-class model for the CLL data. The first three classes – which I label "professionals," "executives" and "upper middle class" – account for nearly 80% of the class structure and correspond to three

factions within the broader dominant class. The two most advantaged classes – professionals and executives – are similar in some respects, but also differ in important ways. Executives account for about 18% of the sample and have the highest rates of business ownership and the highest incomes. Over 95% of executive-class students come from families with incomes above $100,000/year. The professional class, the largest group represented on campus, also exhibits high household incomes, but with higher levels of educational attainment and occupational prestige. Virtually all students in the professional class have at least one parent with a graduate degree and about 80% have a parent with a high-status occupation. To use Bourdieu's framework, the executive and professional classes are similar in the overall volume of capital possessed but differ in the relative distribution of economic and cultural capital. Executive class students come from families with large amounts of economic resources, but place less emphasis on success in the academic field than students from the professional classes (Bourdieu, 1973).

Compared to the dominant classes, the "middle" and "working classes" are disadvantaged in terms of educational credentials, income and occupational prestige. For example, nearly one-quarter of middle class and about 60% of working class students do not have a college-educated parent, while the typical dominant class student has at least one parent who has earned a graduate degree. The upper middle class represents an intermediate category that is advantaged in comparison to the middle and working classes, but with lower levels of parental education and family income than the professional or executive classes.[2] Yet, parents of the upper middle class have more prestigious occupations than executives and higher rates of business ownership than professionals. It is important to note that in a sample more representative of the US population, it could be possible to distinguish among various factions within the middle and working classes, as is found within the dominant class.

Table 13.4 shows the corresponding model profile for the CIRP data. While there are subtle differences, these five classes map along the same dimensions as with the CLL results. This broader sample of elite postsecondary institutions contains a somewhat larger proportion of working class and upper middle class students and a smaller share from the professional classes. Still, about 77% of students come from dominant backgrounds (i.e., professional, executive and upper middle class classes). Selective, private colleges and universities are largely the domain of the dominant classes, as students from the most subordinate social backgrounds have been largely discouraged or eliminated at earlier stages in the educational system (Bourdieu & Passeron, 1979).

How is social class associated with cultural styles and other educational resources or characteristics on these elite college campuses? Tables 13.5 and 13.6 provide

[2] The "upper middle class" bears some resemblance to Bourdieu's (1984a: 59, 339–365) description of the "petty-bourgeois," a heterogeneous group that includes small business owners, junior executives, technicians, clerical workers and school teachers. Bourdieu's use of the term "petty-bourgeois" is broader than Marx's, and includes both upwardly mobile families from middle and working class origins as well as former upper-class families in decline (Bourdieu, 1984a: 59).

Table 13.4 Relative size of latent classes and conditional probabilities of being in each response category, *Cooperative Institutional Research Program*

		Professionals	Executives	Upper-middle class	Middle classes	Working classes
Class size		0.231	0.154	0.384	0.118	0.113
Parent's education	Less than college degree	0.004	0.000	0.000	0.293	0.534
	College degree	0.012	0.396	0.381	0.507	0.430
	Graduate degree	0.984	0.604	0.619	0.200	0.036
Parent's SEI	Below US mean	0.003	0.000	0.002	0.000	0.348
	US mean to +1SD	0.001	0.713	0.116	0.886	0.144
	+1SD to +2SD	0.011	0.287	0.828	0.084	0.479
	+2SD or more	0.986	0.000	0.053	0.031	0.029
Household income	$19,999/year or less	0.008	0.000	0.017	0.048	0.088
	$20,000–$49,999/year	0.035	0.015	0.096	0.169	0.362
	$50,000–$99,999/year	0.174	0.097	0.419	0.453	0.470
	$100,00–$199,999/year	0.442	0.575	0.401	0.214	0.078
	200,000/year or more	0.341	0.313	0.066	0.117	0.003
Business ownership	Yes	0.084	0.987	0.120	0.969	0.001

comparisons on additional socioeconomic, high school and college achievement variables for the CLL and CIRP data, respectively. Also, each dataset includes several items related to cultural activities and participation. As shown above, the two samples are quite similar in terms of the underlying class structure and association between social class and other student characteristics. At private, selective colleges and universities, white students are more likely to be from dominant backgrounds, especially the professional and executive classes. For example, in the CLL black students make up only about 4 percent of the executive class, compared to one quarter of all students from working class backgrounds. In contrast, nearly 80% of the executive class and three-quarters of the professional class is white, compared to only about one-third of the working class. Other socioeconomic characteristics associated with dominant backgrounds include being a citizen and having an intact two-parent household, while middle and working class students were more likely to have a mother who worked full-time during high school. Also, the professional and executive classes have larger family contributions, and rely less on loans, to cover college expenses.

Students from dominant backgrounds possess more educational resources, and participate more frequently in a range of cultural activities than middle or working class students. In the CLL, about 30% of executive class and one-quarter of

Table 13.5 Socioeconomic and high school background characteristics, cultural activities and academic achievement, by class membership, *Campus Life and Learning* (means)

	Professional class	Executive class	Upper-middle class	Middle classes	Working classes
Socioeconomic and high school background					
US citizen *	0.95	0.94	0.92	0.89	0.80
Race/ethnicity:					
White*	0.75	0.79	0.62	0.53	0.33
Black*	0.05	0.04	0.08	0.15	0.25
Latino*	0.06	0.07	0.08	0.11	0.19
Asian**	0.12	0.09	0.17	0.18	0.18
Other	0.02	0.02	0.05	0.03	0.05
Intact family *	0.91	0.93	0.83	0.73	0.65
Mother work full-time*	0.39	0.34	0.57	0.52	0.52
College expenses:					
Family – $5K or more*	0.90	0.91	0.76	0.60	0.44
Loans – $5K or more*	0.10	0.08	0.26	0.23	0.18
Private high school*	0.25	0.30	0.14	0.12	0.11
Application resources*	8.07	8.00	7.24	6.90	6.70
Duke University legacy*	0.25	0.26	0.18	0.08	0.09
Student's Cultural activities					
Visit museum	2.02	1.98	1.99	1.92	1.92
Attend opera*	2.04	1.89	1.90	1.86	1.77
Go to a movie theater	2.81	2.80	2.74	2.78	2.71
Attend music concert*	1.92	2.01	1.82	1.79	1.71
Attend sport event*	2.60	2.60	2.48	2.45	2.31
Go to zoo/science center	1.85	1.79	1.76	1.87	1.84
Academic achievement and outcomes					
SAT scores*	1,414.76	1,401.90	1,409.09	1,371.10	1,348.60
Final college GPA**	3.48	3.38	3.44	3.35	3.39
Graduate with honors**	0.32	0.18	0.28	0.22	0.20
Future plans:					
Graduate school***	0.37	0.29	0.42	0.49	0.35
Work full-time***	0.54	0.62	0.50	0.47	0.63
Highest degree aspirations:					
Bachelor's***	0.07	0.17	0.09	0.08	0.07
Master's	0.36	0.41	0.34	0.32	0.24
Doctorate**	0.57	0.42	0.57	0.60	0.69

Significant inter-class differences are denoted as: * $p < 0.001$, ** $p < 0.01$, ***$p < 0.05$

professional class students attended private high schools, compared to about 12% of working and middle class students. Additionally, dominant class students are more likely to be legacy cases: a group that is shown to have an advantage in the college admissions process, especially at elite colleges and universities (Karabel, 2005; Karen, 1991). Looking at cultural participation, the CLL and CIRP data reveal that students from professional and executive households participate more

Table 13.6 Socioeconomic and high school background characteristics, cultural activities and academic achievement, by class membership, *Cooperative Institutional Research Program* (means)

	Professional class	Executive class	Upper-middle class	Middle classes	Working classes
Socioeconomic and high school background					
US citizen*	0.98	0.97	0.97	0.94	0.94
Race/ethnicity:					
White*	0.86	0.92	0.84	0.80	0.68
Black*	0.02	0.01	0.03	0.03	0.09
Latino*	0.04	0.03	0.04	0.06	0.10
Asian**	0.05	0.04	0.07	0.09	0.10
Other	0.02	0.01	0.02	0.02	0.03
Intact family*	0.86	0.92	0.86	0.81	0.72
College expenses:					
Family – $5K or more*	0.93	0.94	0.81	0.77	0.48
Loans – $5K or more*	0.06	0.05	0.10	0.10	0.14
Student's Cultural activities					
Visit museum (HS)*	1.90	1.84	1.82	1.78	1.74
Attend music concert*	2.17	2.14	2.12	2.11	1.96
Play musical instrument*	1.80	1.70	1.81	1.76	1.56
Academic achievement and outcomes					
SAT scores*	1,355.04	1,344.07	1,349.13	1,331.32	1,298.24
High school GPA*	3.79	3.76	3.80	3.80	3.82
Final college GPA***	3.43	3.38	3.39	3.38	3.30
Future plans:					
Graduate school*	0.33	0.28	0.30	0.26	0.33
Work full-time*	0.54	0.63	0.60	0.66	0.58

Significant inter-class differences are denoted as: *$p < 0.001$, **$p < 0.01$, ***$p < 0.05$.

frequently in a range of activities, and students from the working classes participate least frequently. Dominant class students are more active in both "highbrow" – such as visiting an art museum or attending the opera – and "popular" activities, such as going to a concert, the movies or sport event. Rather than highlighting a strong correspondence between class origins and cultural behaviors (Bourdieu, 1973, 1984a), these results are more supportive of arguments suggesting that the relationship between stratification and cultural lifestyles has changed (e.g., Alderson et al., 2007; Peterson & Kern, 1996). Social elites act less like "snobs" and more as "omnivores," consuming a greater variety of cultural forms than individuals from lower social classes.

Students from professional and executive backgrounds enter college with an abundance of economic and symbolic capitals. Yet, the executive class appears to invest less of these energies and resources into the educational sphere (Bourdieu, 1973). Compared to other dominant class students, executive students have lower SAT scores and lower college grades. Executive students are the least likely to

graduate with honors of any student group, including the middle and working classes. After graduation, executives are more likely to plan on working full-time, rather than attending graduate or professional school, and have the lowest degree aspirations of any group. Many dominant class students, such as the executive students on elite college and university campuses, possess resources and capitals that remain inactivated or are not used to gain educational advantages (Lareau & Weininger, 2003).

13.5 Discussion

Social class is a fundamental category to Bourdieu's broader theory, and helps to unify other key concepts such as cultural capital and habitus. By melding together Weber's categories of class and status group (Chan & Goldthorpe, 2007b), Bourdieu emphasizes that while there are distinct economic and symbolic dimensions to social class they are too interrelated to be considered as separate stratification systems. While the dominant and lower classes are distinguished in terms of volume of capital, various factions within the dominant class differ in the ratio of economic to cultural resources. Divisions between and within these broad classes can lead to distinct experiences and relationships to social institutions. Social class acts as the objective foundation to habitus, the mechanism that drives the competition over symbolic capitals.

Exceptional qualitative studies have applied Bourdieu's concepts to explain how social class affects schooling at the primary (e.g., Lareau, 2000) and secondary levels (e.g., MacLeod, 1995), as well as during the transition into postsecondary education (e.g., McDonough, 1997; Reay et al., 2005). In some respects, quantitative applications have lagged behind by focusing disproportionately on the concept of cultural capital. Further, by concentrating on "highbrow" cultural forms, these studies neglect the broad, varied cultural tastes and practices of contemporary social elites (e.g., Alderson et al., 2007). LCA provides a way to consider how experiences with educational institutions differ not only for students from advantaged and subordinate backgrounds, but also for students from different locations within the dominant half of social space. Divisions between dominant and subordinate groups as well as within these broad class fractions – based on the relative compositions of economic and cultural capital – lead to distinct trajectories and experiences.

Results show that a five-class model does a satisfactory job of describing the class structure of selective, private colleges and universities. While most students come from relatively advantaged socioeconomic backgrounds, LCA reveals important distinctions within dominant class categories. For example, the typical professional and executive class student enter college with an annual household income greater than $200,000/year. Yet, parents of the professional class have higher academic credentials and are much more likely to work in high status occupations than the executive class, who are much more likely to be business owners. These

two classes may be similar in the total volume of resources possessed, but they differ in the ratio of economic to cultural capital. These subtle differences continue to be evident through the college years, as professional class students achieve higher grades and test scores, and are more likely to graduate with honors and continue study in graduate school. Executive class students devote fewer energies and resources for educational success, and may be more concerned with translating their resource advantage into economic rewards.

Selective colleges and universities serve as important links from the educational system to elite occupations (Katchadourian & Boli, 1994; Useem & Karabel, 1986). Net of individual student characteristics and other institutional factors, attending a selective college or university has a positive impact on future earnings (Bowen & Bok, 1998; Kingston & Smart, 1990), and occupational status (Pascarella & Terenzini, 2005: 467–476). Families, friends and gatekeepers within the educational system all influence which postsecondary institutions students consider, helping to reinforce social class divisions in higher education (McDonough, 1997). Students and parents from different class backgrounds possess qualitatively and quantitatively different types of information about postsecondary education (Reay et al., 2005). In short, students from dominant class backgrounds have a better sense of which colleges and universities will lead to greater future occupational and financial rewards.

The results from LCA illustrate three distinct categories of students from relatively advantaged backgrounds that together account for over three-quarters of the student body. A disadvantage to examining such elite institutional settings is the aggregation of the lower and middle classes, and an inability to distinguish between subordinate class factions (e.g., Willis, 1977). Yet, these results also show the culmination of the numerous – and often subtle – social processes, struggles and consecrations that take place at earlier stages in the educational system, allowing elite universities to be largely the purview of dominant class students (Bourdieu, 1996b).

Chapter 14
Changing Determinants of Consumption in Hungary, 1982–1998

Péter Róbert

Abstract The paper investigates the relationship between lifestyle and social position by translating Bourdieu's theory into empirically testable models. Two dependent variables are defined; cultural consumption is measured by number of books, and visiting theater, museums, and concerts; material consumption is measured by possessing various consumer durables in the household. The analysis reports on how the effects of status-related (education, prestige, income), class-related (service and entrepreneurial class) and demographic (sex, age, region) measures on cultural and material consumption have changed over one and a half decades in Hungary. Data are taken from four nationwide surveys: 1982, 1986, 1992 and 1998. For testing changes over time identical measures have been constructed, cases have been weighted equally and the analysis is performed on a pooled data-set. Changes in determinants of cultural and material consumption are estimated by OLS regression models including the impact of time, the aforementioned explanatory variables, as well as interaction terms of the predictor variables with time. Results confirm that greater economic assets increase cultural and material consumption. Education and service class membership are stronger predictors of cultural consumption, while income and self-employment better explain material consumption. Contrary to expectation, these effects changed little in post-communist Hungary.

14.1 Introduction

The broad approach of stratification and mobility research suggests taking into account various types of the so-called 'correlates and consequences of social stratification'. The research topics in this field comprise, among others, the investigation of the determinants of lifestyle. How is lifestyle affected by standard measures of social

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status like education, occupation, income or by demographic characteristics like gender, age, or place of residence? What is the role of lifestyle in the status reproduction or status attainment process? Sociologists repeatedly try to answer similar questions by combining classic theoretical approaches with up-to-date research methodology. This chapter follows this tradition, based on Hungarian data.

Lifestyle analysis has a particular relevance for Eastern European societies. While traditional research in stratification and mobility has revealed a relatively low level of social differentiation and a high level of social openness, investigating lifestyle and consumption patterns provides evidence of unique forms of the reproduction of social inequalities under communism (e.g. Blaskó, 2003; Böröcz & Southworth, 1996; Ganzeboom, De Graaf, & Róbert, 1990; Kolosi, 1993; Kraaykamp & Nieuwbeerta, 2000; Mateju, 1990; Róbert, 1991, 1997). Generally speaking, these papers argue that traditional forms of social inequality were largely eliminated under communism; however, lifestyle could be less stringently controlled and therefore its effect on inequality was more pronounced.

This analysis investigates the changing determinants of lifestyle, *understood as consumption*, over one and a half decades in Hungary, during which political and economic systems underwent major transformation. In the following sections, I use Bourdieu's theory of cultural consumption as basis for an empirical model and establish testable hypotheses. Following a description of data and variables, I present empirical findings. In closing, I discuss the results in the light of the cultural and economic transformations in Hungary between 1982 and 1998.

14.2 Theories and Hypotheses

Following a multidimensional approach in stratification research, lifestyle is a crucial component of social status. In addition to class position, Weberian theory stresses the importance of status groups and their similarity with respect to lifestyle and social prestige (Weber, 1966). Various elements of status are manifested in lifestyle and lead to the '*stylization by life*' to use Weber's term. Lifestyle comprises actions and practices and represents features of status that are noticeable for the other members of society. Veblen (1931) refers to a combination of consumption, prestige and self-presentation in his work on the 'leisure class'. Visibility is also an important feature of social status (Collins, 1979) when people use lifestyle to demonstrate their social standing and to recognize others who occupy similar social positions. This is the way lifestyle builds both horizontal and vertical connections among members of equal class standing (DiMaggio, 1994).

Bourdieu's work is vital in re-thinking Weber's model of social structure. Through development of his well-known concepts such as the forms of capital, habitus, social space, and field, Bourdieu better articulates the sociological relationship between taste, aesthetic preferences, consumer behavior, lifestyle and class position. For Bourdieu (1984a: 174), taste and preferences are 'a system of matching properties' which bring individuals together but also separate them

from one another. He argues that preferences are organized according to the fundamental structure of social space determined by the *volume* and *composition* of capital. Bourdieu (1986) distinguishes three forms of capital: economic, cultural and social. Furthermore, he argues that the configurations of capital – which are characteristic of classes or class factions – generate habitus, which shapes individual actions embodied by particular lifestyle reflective of class. As it turns out, the order of 'variables' is crucial here. Bourdieu essentially disagrees with Veblen and rejects his causal order, namely that consumer practices are status-seeking strategies. Empirically speaking, this means that status is the dependent variable and consumption or lifestyle is the explanatory variable. But Bourdieu (1977a) claims that disposition and habitus are the products of class situation and not their cause. If habitus produces practices which take the form of various lifestyles, then consumption or lifestyle should be regarded as a dependent variable.

Next, Bourdieu considers the importance of distinctive consumption as being dependent on its separation from the necessities of daily life. This allows a distance to be created between manual productive labour and the bourgeoisie class. Habitus and taste play crucial roles here again in transforming necessities (constraints) into preferences and in generating the set of choices constituting lifestyles (Bourdieu, 1984a). Here, I can observe the outlines of an explanatory or causal mechanism. On the one hand, necessities are apparently connected to positions in 'social space' in the sense that the volume and configurations of capital link consumption and lifestyle to class conditions. Class conditions generate class habitus and taste which produce lifestyles; the outcome of this process is described by such dualities as working-class habitus of 'necessity' and dominant-class habitus of 'distinction'.

The empirically testable research question is therefore whether low social position (or lack of a large volume of capital) will lead to a lesser level of consumption. On the other hand, when economic restraints are reduced the habitus of distinction and the ability for non-essential consumption will influence lifestyle. In this latter case it is less the amount but the composition of capitals which matters. Bourdieu (1984a: 374) claims that possessing money, economic (or financial) capital will lead to different lifestyles (for example, the consumption habits of the 'parvenus' or nouveau riche) than also having cultural capital. Cultural capital comprises the knowledge and the taste which produce the dominant-class consumption patterns and leisure participation. Bourdieu stresses that schooling also plays a central role in generating this knowledge, habitus or taste, though his well-known thesis declares that cultural capital can be less accumulated in schools with family being its main transmitter from one generation to the next (Bourdieu & Passeron, 1990).

The separation of economic and cultural capital is vital for studying lifestyle. Individuals tend to possess disproportionate amounts of economic and cultural resources. The distinctive lifestyle can largely be understood by the distribution of these two forms of capital. Some people of a certain class positions possess economic capital but few cultural assets (e.g., business owners, entrepreneurs), while others have predominantly cultural capital (e.g., intellectuals, professionals) with limited economic assets. This distinction divides lifestyle into two dimensions: cultural and material. The resulting bifurcation is illustrated by a two-dimensional

'map' of space of social positions where the vertical access express the volume of capital and the horizontal access denotes the configurations of capital (Bourdieu, 1984a: 128–129). The space of lifestyles implies that those with more economic capital tend to follow a material lifestyle, while those with greater cultural capital tend to follow a cultural lifestyle. This is the next empirically-testable assumption.

Bourdieu's work emphasizes the relationship between lifestyle and social position. Although the empirical evidence in Bourdieu's scholarship primarily focuses on descriptive methods such as correspondence analysis, his theory can also be applied to explanatory causal models. For example, subsequent studies support his cultural reproduction thesis (De Graaf, 1989; De Graaf, 1991; DiMaggio, 1982) as well as the social basis of lifestyle or cultural consumption (DiMaggio & Usteem, 1978, 1980; Ganzeboom, 1982). Additionally, studies on Eastern Europe support these aspects of his work, though space limitation prevent detailed discussion here.

This chapter builds a model to predict cultural and material consumption as dependent variables in order to draw conclusions about the determinants of lifestyles in accordance with Bourdieu's theory but based on statistical tests from multivariate analysis. The main predictors are arranged into three groups measuring individuals' socio-economic status, class position and demographic features. The relevant hypotheses can be summarized as follows.

For *socio-economic effects* the three classic variables, education, occupational prestige and income are used. The assets connected to these variables that differentiate vertically among individuals are obvious. Regarding the volume of these resources I expect that higher level of schooling, jobs with larger prestige and higher levels of income will increase consumption; people with larger stocks of these assets are moving away from 'necessities' and closer to freedom in consumption. In statistical terms I expect positive effects of these variables on consumption. With respect to the configuration of these measures, for predicting cultural consumption, it is education, and for predicting material consumption, it is income which is assumed to have a bigger impact.

Two types of *class effects* are considered in the analysis: the impact of service class and of entrepreneurial class membership. It is assumed that both of these classes comprise individuals with relatively larger volume of assets and, consequently, with more freedom for choosing their lifestyle. Inclusion of these variables aims to test explicitly Bourdieu's claim that those with a larger stock of cultural capital, i.e. the service class, will follow a cultural lifestyle and those with a bigger amount of economic capital, i.e. the entrepreneurs, will favor the material lifestyle.

Demographic factors also play largely the role for controls and three variables are considered: gender, age and place of residence. Gender is included in the model for cultural consumption only and it is expected that women's participation here is stronger than men's. For age effects it is expected age is negatively associated the level of cultural consumption, especially the outdoor activities like going to concerts, theatre or museum and of material consumption like possessing more goods. With respect to region, larger and more urbanized settlements can provide better opportunities for both types of consumption.

Since I carry out this empirical test on Bourdieu's theory by using Hungarian data from several cross-sectional surveys covering a period of 1.5 decades partly

from the communist and partly from the post-communist times, I have to take into account the peculiarities stemming from such a time frame. Post-communist transformation resulted in significant changes in the social structure of societies in Eastern Europe including privatization, an emerging self-employed class, growing income inequalities and social differentiation. As a consequence of these processes post-communist social structure is expected to be more ordered than before. Putting this into a formal hypothesis I assume an increase in the impact of the status measures, of the class variables as well as of the demographic features on cultural and material consumption over time between 1982 and 1998. Additionally, I expect a particular shift regarding cultural and material consumption. Since material consumption was stronger controlled under communism, cultural activities were better expressions of lifestyle for individuals with high social standing (Wnuk-Lipinski, 1983). But I expect that material lifestyle is particularly affected by status and class characteristics under post-communism.

14.3 Data, Measurements and Methods

Four datasets are used for the analysis: the Stratification Model Survey (N = 11,722) from 1982, the TARKI-I Survey (N = 5,999) from 1986, the TARKI Mobility Survey (N = 2,998) from 1992 and the TARKI Monitor Survey (N = 3,792) from 1998. All surveys have been carried out on nationwide probability samples, using a multistage sample-drawing procedure. Respondents aged 18 and over were selected for the analysis. A pooled data-file has been constructed where all files have been weighted equally (N = 3,000/file).

The dependent variable for cultural consumption is based on four dichotomous (yes or no) measures of cultural consumption (*visiting theater, concerts, museum in the last 12 months, and having more books than the average*).[1] The other dependent variable for material consumption is based on four dichotomous measures on the possession of household durables (*color TV, refrigerator, automatic washing machine, car*).[2] In both cases the Z-score method was applied for constructing a scale of cultural and material consumption. This means that the standardized values of the cultural and material consumption items were added up, applying a weight which is based on the distribution of the items within the society.[3]

Based on the availability of further five household items (*freezer, video, microwave, CD-player and PC*), but only for 1992 and 1998, a second scale was constructed for material consumption in order to provide a better and more sensitive measure which is based on more expensive household durables.

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[1] The appropriate questions had approximately the same wording but the number of categories was different in the data-sets. This is why dichotomous variables were constructed.

[2] Only these four items were identically available in the four data-sets.

[3] The range of values on the cultural and material consumption measures is between −2.75 and 10.23 as well as between −9.01 and 8.54, respectively.

For the independent variables of the analysis, education is measured by the years of schooling completed. Occupational prestige is measured by Treiman's SIOPS-score. Income is measured by the per capita family income which was transformed into deciles (in order to handle the huge inflation within the years under consideration). Service class is a dummy and denotes categories I and II of the Erikson-Goldthorpe-Portocarero (EGP) classification while entrepreneurial class is a dummy and denotes categories IVa or IVb of the EGP classification. For gender men are coded 1 and woman are coded 0. Age is measured in years and place of residence is measured as an ordinal variable by the size of the settlement, where the lowest category denotes villages with less than 500 inhabitants and the highest category is Budapest.

OLS regression models were fitted separately for cultural and material consumption. First, the models were fitted to the data separately for the four periods and then, in order to test the significance of changes over time, the models were re-estimated on the pooled data-file. Here dummy variables for 1986, 1992 and 1997 (1982 = reference category) were used to capture the direct effects on temporal change and interaction terms between the independent variables and time were used to test the temporal changes for the predictors. In the last step, the alternative measure of material consumption is examined for a subset of survey years.

14.4 Findings

Findings for the multivariate analyses are found in Tables 14.1 through 14.4. In Table 14.1, the estimates predicting cultural consumption are presented separately for the 4 years under consideration, while in Table 14.2, results are presented for material consumption as the outcome of interest. It is noteworthy that the models work better for cultural consumption (R^2s are higher) than for material consumption.

Table 14.1 Changes in determinants of cultural consumption, 1982–1998

(*Unstandardized regression coefficients*)

Independent variables	1982	1986	1992	1998
Education (years)	0.286***	0.258***	0.316***	0.405***
Occupation (prestige)	0.015**	0.022***	0.019***	0.014**
Income deciles	0.136***	0.176***	0.180***	0.106***
Service class	0.964***	0.487***	0.882***	0.894***
Entrepreneurial class	−0.148	0.225	0.480*	0.747***
Gender (male = 1)	−0.382**	−0.341***	−0.573***	−0.419***
Age (years)	−0.006***	0.002	−0.002	−0.009***
Region (size of settlement)	0.210***	0.235***	0.196***	0.129***
Constant	−4.439***	−5.628***	−5.793***	−5.302***
Adjusted R squared	0.355	0.383	0.440	0.385
Equally weighted N	3,000	3,000	3,000	3,000

***p<0.001, **p < 0.01, *p<0.05.

Table 14.2 Changes in determinants of material consumption, 1982–1998

(*Unstandardized regression coefficients*)

Independent variables	1982	1986	1992	1998
Education (years)	0.163***	0.198***	0.241***	0.246***
Occupation (prestige)	0.015**	0.022***	0.023***	0.021***
Income deciles	0.174***	0.132***	0.145***	0.204***
Service class	0.252	0.077	–0.190	–0.221
Entrepreneurial class	1.396**	1.597***	0.889***	1.116***
Age (years)	–0.005	–0.004	–0.018***	–0.026***
Region (size of settlement)	0.137***	0.160***	0.155***	0.073***
Constant	–3.357***	–4.252***	–4.110***	–3.457***
Adjusted R squared	0.220	0.267	0.319	0.272
Equally weighted N	3,000	3,000	3,000	3,000

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

Almost all of the predictor variables are statistically significant in the multivariate models. In line with the hypotheses drawn from Bourdieu's theory, education affects cultural consumption more than material consumption. Service class membership is a strong predictor for cultural consumption but turns insignificant for material consumption. At the same time membership in entrepreneurial class has a strong impact on material consumption. Level of urbanization influences cultural consumption stronger than material consumption (Tables 14.1 and 14.2). Estimates also suggest an increasing trend over time for education. The impact of age reveals the advantage of younger cohorts displayed by a positive association with material consumption, while a declining trend can be observed for regional effects. For the other predictor variables, estimates do not show clear tendencies.

After estimating the models on a year by year basis, I now turn to the pooled analysis including the interaction terms between time and the independent variables in order to investigate whether temporal changes shown by the estimates from the models for each years separately are significantly different or not. While the four separate models in the previous tables may suggest that the predictors vary in strength by year, the interaction terms can test whether the slopes are significantly different from one another. Models for cultural and material lifestyle are estimated in two steps, including first the main effects of time and of the other independent variables and then adding the interaction terms.

The pattern for the main effects regarding changes over time displays an increase for cultural participation during the communist era up to 1992 contrasted to 1982. There is a drop for 1998, however, when cultural consumption seems to be at a lower level than under communism. This result is in line with other official statistical data on visiting theatres, museums, concerts or buying books. A likely explanation is that tickets, entry fees or book prices were subsidized under communism and activities fell when these subsidies became abolished under market conditions. Regarding material consumption, the pattern of changes over time displays an increase in the possession of the elements of the measure.

Table 14.3 Changes in determinants of cultural and material consumption (pooled file, N = 12,000) (*Unstandardized regression coefficients*)

	Cultural Consumption		Material Consumption	
Independent variables	Main effects	Interactions with year	Main effects	Interactions with year
Year (reference = 1982)				
1986	0.290***	−0.812*	0.750***	0.099
1992	0.692***	−1.009**	2.053***	1.457***
1998	−0.502***	−0.846*	2.576***	2.494***
Education (years)	0.258***	0.207***	0.193***	0.144***
Occupation (prestige)	0.014***	0.010*	0.020***	0.014**
Income deciles	0.124***	0.098***	0.152***	0.177***
Service class	0.698***	0.729*	0.018	0.074
Entrepreneurial class	0.420***	−0.104	1.195***	0.884***
Gender (male = 1)	−0.367***	−0.289***	–	–
Age (years)	−0.005***	−0.006*	−0.013***	−0.006*
Region (size of settlement)	0.158***	0.153**	0.119***	0.098***
Education X year				
Education X 1986	–	0.015	–	0.042
Education X 1992	–	0.097***	–	0.086***
Education X 1998	–	0.098***	–	0.092**
Occupation X year	–		–	
Occupation X 1986	–	0.009	–	0.007
Occupation X 1992	–	0.006	–	0.008
Occupation X 1998	–	0.000	–	0.006
Income deciles X year				
Income deciles X 1986	–	0.054**	–	−0.052*
Income deciles X 1992	–	0.083***	–	−0.037
Income deciles X 1998	–	−0.022	–	0.013
Service class X year				
Service class X 1986	–	−0.338	–	0.003
Service class X 1992	–	0.199	–	−0.196
Service class X 1998	–	−0.038	–	−0.247
Entrepreneurial class X year				
Entrepreneurial class X 1986	–	0.207	–	0.639
Entrepreneurial class X 1992	–	0.564	–	−0.006
Entrepreneurial class X 1998	–	0.670	–	0.204
Gender X year				
Gender X 1986	–	−0.006	–	–
Gender X 1992	–	−0.248*	–	–
Gender X 1998	–	−0.045	–	–
Age X year				
Age X 1986	–	0.005	–	0.002
Age X 1992	–	0.001	–	−0.011*
Age X 1998	–	−0.002	–	−0.019*
Region X year				
Region X 1986	–	0.054*	–	0.050
Region X 1992	–	0.034	–	0.053
Region X 1998	–	−0.061*	–	−0.025
Constant	−4.082***	−3.345***	−4.821***	−4.532***
Adjusted R square	0.393	0.403	0.404	0.411

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

The other main effects look similar to those presented before and are in line with the theoretical assumptions; education and service class have stronger influence on cultural consumption; income and entrepreneurial class have stronger impact on material consumption. The models with the main effects explain about 40% of the variance in cultural and material consumption.

Adding the interaction terms to the equations hardly increases the explanatory power of the models. In fact, very few of interaction terms turn out to be significant. Education has an increasingly strong impact on both forms of consumption after the collapse of communism. There is an increase in the effect of income on cultural consumption; it is not in line with the expectations but is plausible when markets play stronger roles in culture. Entrepreneurial class turns to insignificant for cultural consumption, while service class is insignificant for material consumption. The advantage of younger cohorts increased over time for material lifestyle and the disadvantage of people living in smaller and less urbanized settlements decreased significantly for cultural consumption.

In the last step of the analysis the material lifestyle is re-examined on the basis of the alternate version of its measure. At this point, only changes between 1992 and 1998 are considered.

The model is fit on the pooled data set for 1992 and 1998, including the main effects as well as the interaction terms with time. The first model presented in Table 14.4 shows the usual pattern for the predictor variables – only service class

Table 14.4 Changes in determinants of alternate material consumption, 1992–1998 (pooled file, N = 6,000)

(*Unstandardized regression coefficients*)

	Alternate material consumption	
Independent variables	Main effects	Interaction terms
Year: 1998	2.354***	2.434***
Education (years)	0.430***	0.401***
Occupation (prestige)	0.043***	0.041***
Income deciles	0.340***	0.269***
Service class	0.112	–0.201
Entrepreneurial class	2.119***	1.289**
Gender (male = 1)	–	–
Age (years)	–0.059***	–0.036***
Region (size of settlement)	0.150***	0.193***
Education X 1998	–	0.128**
Occupation X 1998	–	0.005
Income deciles X 1998	–	0.166***
Service class X 1998	–	0.290
Entrepreneurial class X 1998	–	1.215*
Gender X 1998	–	–
Age X 1998	–	–0.044***
Region X 1998	–	–0.104
Constant	–7.081***	–7.481***
Adjusted R squared	0.345	0.356

***$p < 0.001$, **$p < 0.01$, *$p < .05$.

membership is insignificant. The second model adds the interaction terms and it does not add much improvement to the model. But estimates indicate a significant increase in the impact of education, income and entrepreneurial class membership as well as for the advantage of younger cohorts. Material consumption measured in a more sensitive way is affected more strongly by these predictors in 1998 than in 1992.

14.5 Discussion

The goal of the paper was to investigate the relationship between consumption and social position by translating Bourdieu's related theory to empirically testable models on changing determinants of cultural and material consumption in Hungary between 1982 and 1998. The first hypothesis drawn from the theory expected that larger volume of capital as expressed by level of schooling, occupational prestige and income would increase the level of consumption. The second hypothesis referred to the configuration of capital and expected a larger impact of education and service class position on cultural consumption as well as a bigger effect of income and entrepreneurial class on material consumption. An additional country-specific assumption was based on the fact that Hungary has undergone a significant economic and social transformation process during these years with definite influences on social stratification in the direction of stronger differentiation. Consequently, stronger effects of the determinants were expected for the post-communist era in Hungary than before.

Summarizing the results of the analysis, Bourdieu's basic theory seems to be confirmed for Hungary; larger stock of assets increases consumption and the configuration of the capitals displays the expected duality for cultural and material consumption. The results are consistent with the predictions by Bourdieu (1984a) connecting cultural and material lifestyle to persons in the society with either higher cultural and less economic capitals or with lower cultural and more economic capital, respectively. At the same time, I am aware that this picture is based on a rough translation of Bourdieu's concept into empirical measures, in particular for the dependent variables. The dependent variables are quantitative in character but due to the limitations in data I was unable to differentiate between various kinds of books possessed, theatre and concert attendance, or car ownership. Had data allowed a more refined definition of cultural and material lifestyle, it would have been possible to conduct a more rigorous test of the theory.

This is perhaps why the hypothesis regarding the increase in strength of determinants of cultural and material consumption in Hungary over time found less support. The determination coefficients (adjusted R^2 values) indicated a growing tendency of explained variance for both cultural and material lifestyle from 1982 to 1992 – the communist era – but this trend broke for 1998 during the post-communist period. The expected increase in the effect of status measures on consumption was present only for education. While both high income and class

positions are associated with a higher level of the cultural and material consumption, estimates based on the interaction terms did not provide evidence of the expected increase. Nevertheless, the alternate, more sensitive measure of material lifestyle seemed to be stronger affected by status and class characteristics under post-communism. Regarding demographic factors, age effects showed a growing tendency, but cultural consumption can be predicted by place of residence to less of an extent in 1998 than in 1992.

Another possible explanation of the partial support of the 'country-specific' hypothesis is that the explanatory variables have to be assessed carefully. Income is one of the critical issues here. There was no existing personal tax system in Hungary in 1982 and 1986, though a system was established by 1992 and 1998. Thus income data reported by respondents in these surveys is less reliable in the 1990s than in the 1980s. Consequently, the influence of income is most probably underestimated for the 1990s. Another concern is the entrepreneurial class, whose membership naturally differed in the 1980s compared to the 1990s; the size increased and its composition changed in terms of education, job and income (Róbert & Bukodi, 2000; Róna-Tas & Lengyel, 1997).

Beyond measurement issues, substantive concerns arise in relation to consumption. For example, *stylistic unity* (Sobel, 1981) or the omnivore character surfaced in relation to cultural consumption. Unfortunately, I am unable to review this growing body of research but we cannot reject the possibility that determinants of consumption and, in particular, on cultural consumption did not reveal significant increases due to cultural participation in Hungary becoming more 'omnivorous'. Expanding the analysis into this direction would also require better measurement of cultural consumption and this should be definitely kept on the agenda of future research. Bukodi (2007) has already made a first step when analyzing a fraction of cultural consumption, book reading in Hungary. She differentiated between 'serious', 'non-fiction' and 'easy' readers but found the most salient structural dividing line between readers and non-readers, though the association between 'serious' reading and high social standing was also strong.

Apparently, this can lead to a concluding remark on testing Bourdieu's theory on lifestyle in Hungary. The present analysis gave some support to an important aspect of Bourdieu's view on consumption, namely that he approaches the issue from a *hierarchical* perspective. Assuming that consumption and lifestyles constitute something hierarchical, its determinants affect them in a *vertical* manner. This is a very important consideration for current sociology when there are so many ideas about *horizontal* differentiation. Findings here suggest that consumption is not beyond class and status, lifestyles group does not replace class and status groups. This study shows that structured structures are strongly present in Hungary.

Chapter 15
Fanship Habitus: The Consumption of Sport in the US

Donald P. Levy

Abstract This chapter offers and tests a theory of "Fanship Habitus." I posit habitus to be, as Bourdieu termed it, a generative principle that encompasses both the active acquisition of knowledge, a way of knowing and the effects that that way of knowing has. As such habitus is the both the incorporation and expression of social location, practices and the resulting cognitive structures which often are expressed through perceptual tendencies and their resultant dispositions. Bourdieu's habitus is what becomes to people their "second nature." This research investigates that second nature in the class of people I see as active sport consumers among white, middle-class, middle-age American men. The data are drawn from a web-based survey of nearly 1,200 respondents and compared with the data from the US Census along the lines of income, education, race. I then use data from the Gallup Poll and the Miller Lite Study of American Attitudes towards Sport to argue that they are similar to only more exaggerated in their commitment to active sport consumption. Their social location, then, is validated as white, middle-class, American men. This location already carries a predisposition towards fanship, foreshadowing the theory.

15.1 Introduction

I usually start my talk on fanship habitus by asking for a show of hands, "How many of you would consider yourself a sports fan?" The percentage varies from academic conference to public lecture, but in most cases a majority lift their arms, some proudly, some halfheartedly and some only after surveying the room. In this chapter, I use data drawn from several United States (US) surveys as well as interviews and participant observation to (1) define fanship habitus, (2) present a measurement of fanship habitus across several populations, and (3) focus on one

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specific group of avid fans in order to construct a complete workable framework of the concept and offer it for continuing validation.

Habitus, as Bourdieu (1977a, 1978) termed it, is a generative principle that encompasses both the active acquisition of knowledge, a way of knowing and the effects that that way of knowing has. As such habitus is both the incorporation and expression of social location, practices and the resulting cognitive structures which often are expressed through perceptual tendencies and their resultant dispositions. Bourdieu's habitus is what becomes to people their "second nature."

In the US the "field" of sport, whether you lifted your hand in agreement to my opening question or not, surrounds every social location. The question then is not whether or not you self-describe as a sports fan but rather to what degree sport, most specifically its consumption, has been part of your socialization, and current practices and consequently a building block of your simultaneous ontological and epistemological processes. Fanship habitus then is the embodiment and expression of both the collective and individual interaction of people with the field of sport.

15.2 Fanship Studied

Gallup Polls in the United States have asked respondents nearly each month since 2000, "In general, would you describe yourself as a sports fan, or not?" In order to minimize seasonal variation, I pooled 5 years of data (2000–2005) to create a sample of 10,905 respondents to this sports fan question. Sixty-one percent of adults indicate that they would describe themselves as sports fans. However, when separating men from women, we find that 72% of men consider themselves to be sports fans while only 51% of women would describe themselves as such. Although, this sample is a larger and more representative sample than my audiences, in order to measure and comment on the habitus of these fans, I propose a more in depth mode of measurement.

In 1983, the Miller Lite Report on American Attitudes toward Sports (Research & Forecasts, 1983) surveyed 1,319 randomly selected adults on their fanship and spectatoring practices as well as their thoughts and opinions on sports and athletes. Instead of simply asking respondents whether they would describe themselves as a sports fan, this study had respondents indicate the frequency with which they practiced a list of fan activities. Given the centrality of practices to habitus, this study presents a far better snapshot of fanship than the Gallup.

In other words, rather than a simple self-identification the Miller Lite study and the current replications I cite in this chapter, look at what people do and how often they do it. In this way, the importance and depth of being a sports fan, its ontological impact can be measured. The Miller Lite study, asked respondents "how often do you do the following?"

- Watch or listen to sports news on television or radio
- Read the sports pages of your newspaper

- Talk about sports with your friends
- Watch sports events on television
- Listen to sports on the radio
- Read magazines on sports and athletes
- Read books on sports and athletes

Respondents categorized their participation by selecting "daily or almost daily", "about once or twice or week", "about once or twice a month", "less than once a month", or never. Researchers in this study awarded a score of four for any activity engaged in daily, a single point for a weekly activity and no points for any of the three lesser frequencies. They then totaled the number of points for each respondent and decided that those with a score of 14 or more were "Avid" fans, 7–13 were "High Moderate" fans, 1–7 points were "Low moderate" fans and "Non-fans" were those respondents scoring no points. This index that the Miller Lite team called "The Sports Fans Index" (SFI) led them to conclude that, based on what people do as opposed to how they see themselves, 89% of Americans are sports fans with 19% being Avid, 34% High moderate and 36% Low moderate and only 11% being Non-fans.

It is reasonable to rationalize or equalize the Miller Lite sample to the Gallup sample years later by noting the similarity of Gallup fans 61% with the total of Miller Lite's Avid and High Moderate. I concretize those fans as the people that either proudly or readily raise their hand when I pose the Gallup question. But fanship and its associated habitus is both real and deterministic upon not only those fans but the reluctant volunteers in my talks and "low moderates" that may not self-describe as fans but regularly engage in the practices of sport consumption.

15.3 A New Study of Fanship

In order to further the work begun by the Miller Lite study and to construct and test the concept of fanship habitus, I have modernized the behavioral questions in the index, polled both a sample of unabashedly avid fans and a representative sample of Americans. I will first describe the changes to the behavioral questions and then outline both sample's descriptive data as well as the construction of a new Modified Sports Fan Index (MSFI).

The field of sport and the avenues that people travel in their consumption of and incorporation of sport have changed since Miller Lite measured fanship in 1983. In 1983 ESPN, the ubiquitous purveyor of sport programming, news and commentary was only in its infancy. The internet did not exist. Fantasy sports was played by only a few or understood as a parlor game, the simulacrum that is the modern Sports Bar was only beginning to spread, and radio and television shows devoted to sports talk were just entering the programming menu. Today, ESPN is an international phenomenon, internet use is widespread, Fantasy sports is played by upwards of 15 million Americans (Levy, 2005), taverns with non-stop sports played on multiple flat screen TV's abound and sports talk (Nylund, 2007) is available all

day throughout US markets. The practices of sport consumers then have widened to include these additional activities. In order to measure their habitus, I added the following four questions to the earlier list of practices that people engage in:

- Use the internet to keep track of sports
- Listen to sports talk shows on the radio or internet
- Go to a sports bar
- Manage fantasy sports teams

Before describing the two samples and their level of sports fanship, I ask you to picture the manner in which respondents may include the eleven sport fanship practices into their daily lives. Based on my interviews with avid fans especially that I describe later in this chapter, it is easy to see those respondents starting their day by opening their laptop and hitting a favorite weblink that brings them to espn.com or another sports site where they check last night's scores, and news. From there they quickly jump to a website on which they track their fantasy team and through which they may communicate with their competitors. While getting dressed for work the television is tuned to ESPN Sportscenter. Over breakfast they devour both coffee and the sports statistics. Out the door they run and as they drive to work, the radio is tuned into a morning sports talk show. At work, our respondent has several short conversations with co-workers about last night's game and the prospects of winning for the local team. After work, they meet for a beer at the sports bar before heading home to watch the evening's game. They thumb through a sports weekly magazine and end the day with a few pages of John Feinstein's latest tribute to college basketball or major league baseball. Although this scenario may be overstated for many, the seamless integration of sport consumption is true to varying degrees for most Americans and to the degree that that is true, it is validating of fanship habitus.

During the spring of 2008 I surveyed a random sample of 1,352 residents of New York State. Data were collected via telephone interviews from a sample of households of New York State and quotas were programmed into the computer assisted telephone interviewing system to maintain geographic representativeness. The final response rate was 11%. Each of the respondents was asked the eleven sports fanship behavior questions, the seven original questions from the Miller Lite Study and the four additional questions that seemed to appropriately measure the potential changes in the concrete activities practiced by consumers of sport. The raw data were weighted so as to be representative of the population of the state of New York by gender and age. The weighted dataset is made up of 47.2% men with one third of them being between 18 and 34, 40% being between 35 and 54 years of age and 26% being above the age of 55. The 52.8% of the weighted sample that is female is made of 30% between 18 and 34, 38% between 35 and 54 and 31% over the age of 55.

As a validation check I asked the exact self-descriptive question that Gallup had repeatedly posed. My 2008 sample nearly identically matched the Gallup sample. Sixty-two percent of this sample considers themselves sports fans as compared with 61% in the Gallup. Men in this sample self-identify at the rate of 73% and women at 52%. The comparable Gallup numbers were 72% and 51%.

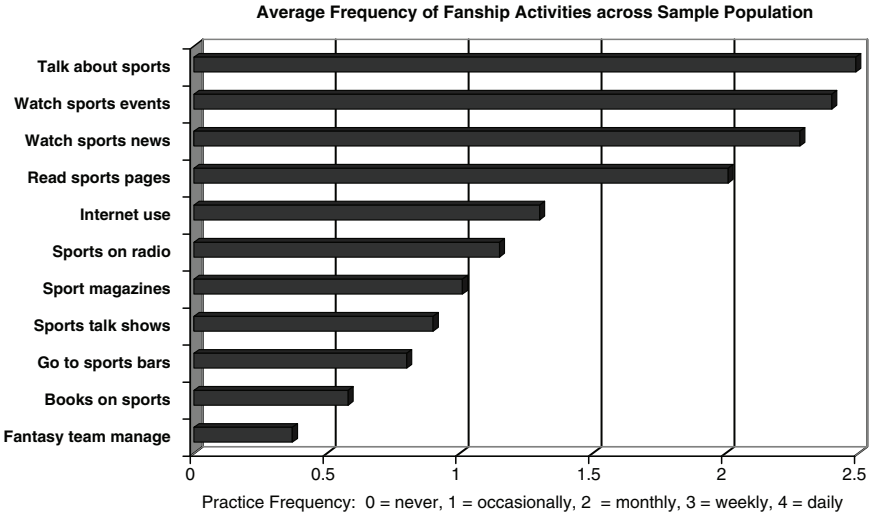

Fig. 15.1 Average frequency of fanship activities across sample population

Similar to the treatment of practices in the Miller Lite study, I assigned a value of "4" for daily practice, "3" for weekly, "2" for monthly, "1" for occasional and "0" for never. Across the entire sample (Fig. 15.1), talking about sport with friends, family or co-workers was the most frequently practiced activity with a mean of 2.5 or on average between monthly and weekly. Talking about sports was closely followed by watching sporting events on television (2.4) and watching sport news on television or listening to it on the radio (2.3). Reading the sports pages of the local newspaper followed with a mean of 2, or on average members of the sample read the sports pages more than monthly but less than weekly. The balance of fanship activities were practiced less frequently on average among the sample. In order they were: Use the internet to keep track of sports (1.3), listen to sports on the radio (1.15), read sports magazines (1.0), listen to sports talk shows on the radio or internet (0.9), go to sports bars (0.8), read books on sports (0.6) and manage fantasy sport teams (0.4).

Some groups within the sample seldom practice, most especially the three least frequented activities: bars, books and fantasy. Although men – most especially young men – engage in those practices at within group rates of 1.0–1.7, in order to build a useful modified sports fan index, I eliminate those three activities from the current discussion. I then total the value of the remaining eight practices for each respondent in order to find their resulting MSFI. Scores range from a low of zero, that is, a respondent that never engages in any of the fanship activities to a high of 32 or a respondent that engages in each and every one of the eight activities on a daily or nearly daily basis. The mean across the entire sample is 13 which can be read as the collective level of fanship habitus across the people of New York State.

Clearly the index taken as a mean is not truly meaningful as a ratio measurement other than as an indicator of the level that a group of people have and are incorporating a set of practices drawn from a particular field into the collective mode of their shared living. The fact that in the US sport, sport practices, sport business, as well as sport texts, meanings and metaphors are everywhere is clearly measured in this mean score of 13, or approximately 40% of a nearly inconceivably obsesses society. Looking at it from another perspective, a society in which few people had time, inclination or motivation to consume sport, that is, sport was not talked about, shown, marketed, broadcast, or commercially used would be quite different from the US and would no doubt score well below the 13 that resulted from averaging this sample.

15.4 Types of Fans

The MSFI provides us a tool with which we can now group respondents into categories of fanship, that is, determine the relationship between fan practices and the previous Miller Lite categories as well as stated self-description, and investigating common stereotypes of fanship by age and age and gender. In order to accomplish this analysis, which remains a mapping of the practices component of fanship habitus (the most reliable measurement), the eight variables that determine the MSFI for each respondent are submitted to K-Means cluster analysis having stipulated four clusters so as to test and advance the four Miller Lite categories. An application here of cluster analysis simultaneously operationalizes Bourdieu's concept of habitus as well as uses his tendency to graphically represent social capital and practices. Given that cluster analysis simultaneously groups respondents by considering each respondent's response or in this case frequency of engagement in each of eight practices, it is possible that the MSFI score of one case in a lower fanship group could be higher than one in a higher group. Still, despite those few outlier cases the overall grouping of respondents to fanship clusters is valid. K-Means cluster analysis succeeds in attributing individuals to, in this case, iteratively developed, as opposed to predetermined, cluster centers by considering the frequency of fanship practices stated in SPSS as categorical data and displayed appropriately as relatively homogenous and for our purposes meaningful groups. As such, K-Means is a more appropriate method than Hierarchical cluster analysis given the level of measurement (Aldenderfer & Blashfield, 1984).

Avid fans make up 22% of the population and range in MSFI from 17 to 32 with a mean of 25. On average, Avid fans practice each of the fanship activities more than once or twice a week. Ninety-nine percent of Avid fans consider themselves to be sports fans. Clearly, being a fan is not something that these respondents say about themselves, but rather it is something that they do and do with regularity. Practicing fanship is a major component of their daily lives. Avid fans practice the three activities that were not included in the MSFI – Books, Bars and Fantasy at average rates approaching monthly. This analysis registers a slightly higher percentage of Avid fans, 22% as opposed to 19%, when compared to the Miller Lite

Study. In terms of gender, the reader may be initially surprised if indeed gender stereotypes govern to find that while 75% of Avid fans are men, a significant 25% of these fans are women.

The second category, Involved fans, make up 29% of the population and have a MSFI range of 10–24 with a mean of 17. Rather than averaging each activity weekly, the Involved fan averages practicing each fanship activity more than once or twice a month. While Avid fans, average across the eight practices aside, actually practice the six leading activities of watching sports and sport news, talking about sports, listening to sports on the radio, reading the sports pages and listening to sports talk show, nearly every day, the Involved fan only practices the top three, watching events and news and talking about sports on a near daily basis. Knowing that one can see that Involved fans do not leave sports fanship out of their daily lives but rather are just less fully active when compared to Avid fans. Sport fanship and the resultant habitus are present but perhaps less dominant. Ninety-four percent of Involved fans self describe as sports fans. Fifty-one percent of Involved fans are men; 49% are women.

Casual fans range in MSFI from 5 to 17 with a mean score of 10 and make up 24% of the population. It is unfair to conceptualize the activities of Casual fans by averaging their MSFI across the eight practices since they tend to only practice watching sport and sporting news, reading the sports pages and talking about sports. But on average they engage in those four activities approaching once a week. Sport fanship is not central to their lives but they are clearly conversant in sport and selectively participatory. They may in part be those whose hands only reluctantly went up. In fact, only 53% self describe as sports fans. But this is where this analysis inspired by Bourdieu and using what people do as opposed to what they say to classify them provides a more reliable typology. Habitus itself and fanship habitus specifically, as Bourdieu shows, is both a product of position and practice as well as generative of, through dispositions, behavior sometimes understood as merely tastes. Surely some Casual fans reject the label of "Sports fan" as not one they relish but their behavior, that is, their practices engaged in for whatever reason, clearly identifies them as a "casual fan", that is, one that knows about sport, can talk about sport and has and is incorporating sport into their being. Sixty-one percent of Casual fans are women while the remaining 39% are men. Although that is not the scope of this chapter, the reluctance of Casual fans to accept the name "sports fan" may say as much about gender relations in the US as it does about accurate self-identification.

Finally, Non-fans are those people for whom sport consumption is not at all central. Twenty-five percent of people are Non-fans, a percentage greater than the 11% identified in the Miller Lite but less than the approximately 39% that refuse to self-identify as fans. Non-fans range in MSFI from 0 to 11 and average only 2 for their MSFI. They do not tend to practice any of the eight fanship activities with any regularity but not unexpectantly, engage in talking about and watching sport and sport news more than any other practice. In that way we see that while their fanship habitus is less significant than that of others, it is not totally lacking (Fig. 15.2).

Before moving to focus on one subset of Avid fans so as to develop a theory of the conceptual structures and perceptual tendencies that result from the practices of fanship habitus and consequently form the constructive dialectic of the process,

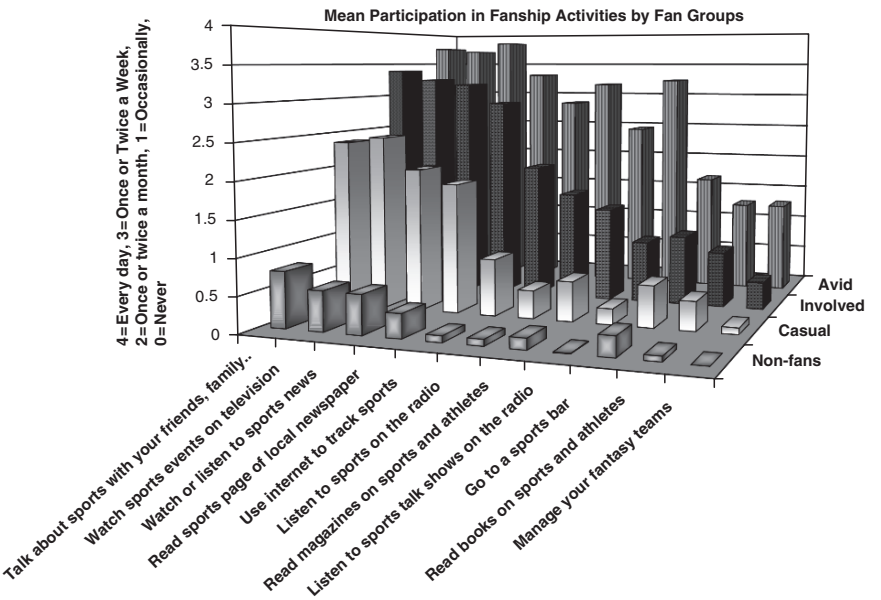

Fig. 15.2 Mean participation in fanship activities by fan groups

I look quickly at the variation by gender of the overall population in terms of their fanship practices.

The previous table is constructed by stating the MSFI as a percentage of the total possible MSFI. In other words, the average Avid MSFI is 25 or 0.78 of the possible total fanship. The chart displays the average MSFI as a percent of total fanship for each group as well as a confidence interval that includes one standard deviation above and below the mean for each group (Fig.15.3). Here we see the degree to which the fanship groups are clear and distinct relative to one another. However, we also see that although men are more inclined than women to be Avid fans or not to be Non-fans, gender in and of itself does not mandate fanship category membership. Also while fanship practice intensity is inversely related to age in men, women tend to increase in fanship from youth to middle age and then decrease as they become seniors. All of these relationships open additional questions beyond the scope of this chapter for the analysis of fanship practices.

15.5 Avid Fans: A Window on Fanship Habitus

We now move briefly to the analysis of a subset of Avid fans drawn from a web-based survey of 1,179 self-selected respondents, all of whom engage in the activity of fantasy sports. Given that even among the general population of Avid fans,

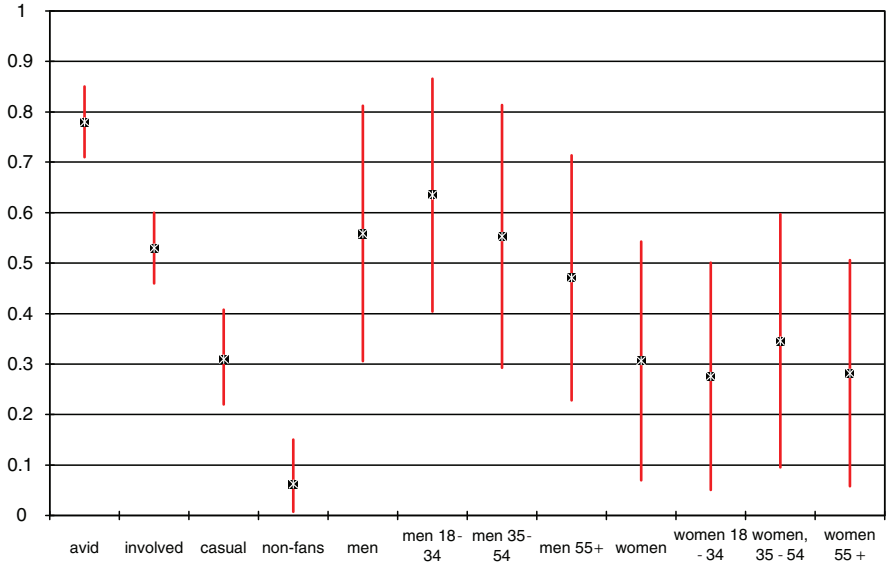

Fig. 15.3 Confidence intervals of fanship by fanship categories, gender and age

fantasy sport participation is rare, we might immediately conclude that these fans are the most avid of the Avid. Fantasy sports is a game based upon the statistics generated on the field by athletes but that then forms the currency of a new competition. Played by over 15 million Americans, today fantasy sports includes all major sports but American football and baseball predominate.

Fantasy players use a variety of methods (auctions, lotteries, etc.) to construct a team of athletes that actually play on separate teams but – and here is the fantasy – for the purpose of their league and their competition exist on paper as a team belonging to a competitor whose empire usually only includes a computer. Players, called owners in fantasy jargon, track on field events as statistics and win or lose their league based upon an individualized set of computations all of which purport in some way to measure indicators of on field prowess. Sport traditionalists bemoan the development of allegiances to non-existent fantasy teams in lieu of home town favorites but fantasy aficionados laud their new found control and ability to follow sport in a way that measures and rewards their ability to know about sport and predict success or failure. The successful fantasy player claims sport knowledge and an ability like a predictive modeler to formulate a better hypothesis of on field achievement. The loser cites bad luck.

Playing fantasy sports can be a casual pastime, but my sample of 1,179 take it very seriously. Still, rather than label them as deviants, I argue that they fall comfortably in the Avid column and are if anything exaggerations of sports fanship rather than exceptions. As such, the outcomes of fanship habitus become more apparent.

Fantasy sports is played overwhelmingly by men. Ninety-eight percent of this sample are men and 90% of those men are white. The average age of the respondents is 37, 63% are married, and 69% have at least a bachelors degree. Compared to a national sample, they also report an income that is 1.67 times the American median household income. In sum, this male dominated sample looks a great deal like the fans we concentrate on when describing sport consumers or spectators with the one possible exception of higher than average, for fans, educational achievement.

Not surprisingly, virtually this entire sample (99.2%) self-identify as sports fans. Using the old Miller Lite classification scheme based upon the eight practices, this sample rates out as 61% Avid, 27% High moderate, and 12% Low moderate. Earlier I discussed including new practices like internet use, frequently sports bars and playing fantasy sports to the indicators of fanship habitus. I did not include Books, Bars and Fantasy in the MSFI given their low frequency across the general population. Applying first that methodology to this group, we find that 74% are Avid, 23% are Involved, 2% are Casual and only 1% would be considered to be a Non-fan. However, when considering the amount of time this group devotes to fantasy sports, one might conclude that nearly all of them are Avid (Fig 15.4).

On average this sample of nearly 1,200 fantasy sport enthusiasts, use the internet to track sports, manage their fantasy sport teams, watch sports news and watch or listen to sporting events nearly every single day. Far greater than a couple of times a week they also talk about sports with friends or co-workers and read the sports pages of their local newspaper. Ninety-four percent use the internet to monitor sports on a daily basis. Eighty-two percent watch sporting events each and every day and 83%

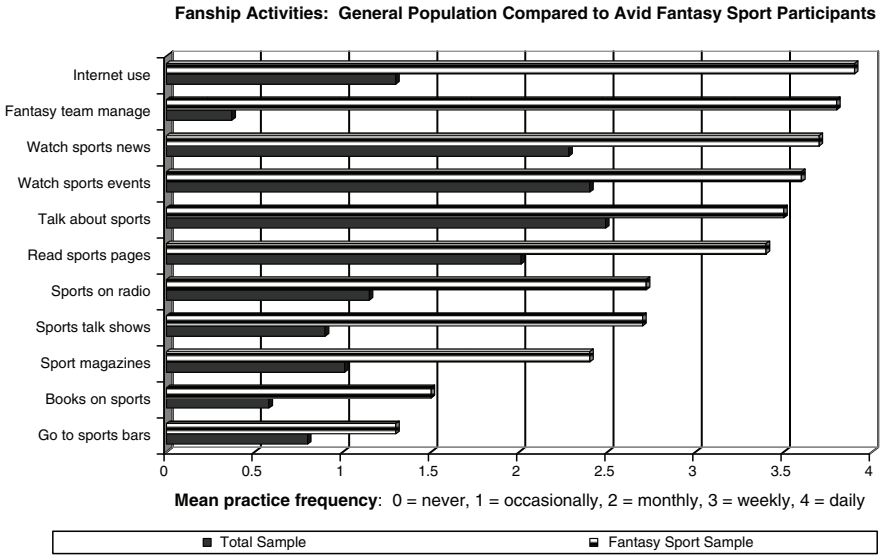

Fig. 15.4 Fanship activities: general population compared to avid fantasy sport participants

report watching sports on television more that 5 h per week every week. For these Avid fans, there is no doubt that actively consuming sport is very much a part of their everyday life.

But the scope of their involvement with sport is qualitatively more significant than even this first level of time commitment indicates. When asked what topic they prefer to discuss when they get together with other men, 98% of the men in this sample said that their preferred conversation topic was sports. When asked to rank the frequency with which they read the various sections of the newspaper, this sample rated sports the highest, mean of nine out of a possible ten with ten indicating "every day." By comparison the front section rated a seven, local news a six, business a five and the comics a four. Forty-eight percent said that when travelling by car they prefer sports or sports talk with 44% saying music was their top choice. And fantasy sports, the preparation, study, managing and competitive interactions demands not only more time but concentrated time as well. Sixty-six percent of these Avid fans devote more than 5 h a week to this game based on statistics and 60% admit to devoting more than an hour a day to thinking, perseverating or simply daydreaming about fantasy sports.

Although it is easy to dismiss this group as "geeks" living perhaps tucked away in their parents basement, that description as we saw does not hold. They are educated, and overall employed in managerial and professional occupations with well above average incomes and in most cases married with a family. They are part of society's mainstream but quite actively and deeply involved in the consumption of and research into sport. While I have shown and clearly argue that they are more Avid than most, still, this group of fans is only more extreme but not different than other fans and non-fans. They think about, analyze, discuss, and watch sports more than others but Involved, Casual and non-fans share to varying degrees the same habitus and certainly are affected by it on the societal level. In order to begin to understand that habitus and its effects, we now delve into it among this group of extreme fans.

In addition to the survey of 1,179 fantasy sport participants, I conducted 55 in-depth interviews with a snowball sample of the sample. During the course of those interviews as well as through my own participation in the practice, I was ever more intricately introduced to the practice of sport consumption and the cognitive structures that coincide with it. The men I interviewed tended to see sport, and its active consumption through fantasy sports, in dichotomous terms – winning and losing – and valued an approach to its consumption that valued "being smart" in which successful or winning participants applied abstraction, rationality and positivism to their consumptive process.

Consuming sport appears to enforce a way of knowing the world that is structured into dualities including winning and losing, right and wrong, and smart or stupid, or even man and woman. Being smart in their approach is seen as the right way to consume sport and to play fantasy sports. It leads to winning rather than losing and in their view is gendered masculine. For these men intelligence is measured by the ability to (1) predict future results based upon their investigation of past performance and (2) control both their own emotions and many other contributing factors, such as the actions of other players both real and fantasy as

possible. Ultimately having transformed people into abstraction, submitting those abstractions to cold, objective study and finally constructing a predictive model of performance based upon that research, intelligence is measured and either validated or not based on clear measurable feedback. Fantasy sports simultaneously fashions a valued cognitive structure set and measures its successful embodiment.

To be clear, winning is the goal and predicting indicators of winning on the field is both the medium and the daily measure. The method these interviewees constructed to achieve success includes abstraction, that is, turning people and events into numbers, rationality, that is, valuing reason over subjectivity or emotion and positivism, that is, continually constructing and testing predictive models, or hypothesis testing as an approach to consuming sport.

One need only glance at any sports page or website devoted to fantasy sports to be immediately immersed in a world of abstractions that are a new and different language. That language, foreign to the complete non-fan, finds progressively more fluent speakers as we progress along the fanship continuum. Fantasy sport enthusiasts add a list of abstractions that dwarf simple indecies like batting average or earned run average. Furthermore, the abstraction is more salient than humanity. One respondent said as much, "I always say they're – I'm almost more interested in players as random number generators than I am as – than I am in their actual sport and in their own personhood."

They went on to explain to me that in order to use these abstractions, these statistics that they argue hold the true description of sport as well as the key to its understanding and the ability to predict its future, the adroit and appropriate fantasy player or avid fan must train himself to not be swayed by emotion. Some equated an emotional approach to sport consumption as either that of a child or a woman. They preferred cold analytical reasoning.

Now cleansed of emotion and armed with abstraction, positivism or predictive modeling can begin. One told me, "You know, it's maddening to try to get – I don't think anyone will ever get it down to an exact science, but you know, it's so much fun to try." Implicit in this approach, this cognitive structure, this aspect of habitus, is the belief that given a large enough dataset, with progressively better operationalization of indicators, with the inclusion of appropriate variables, that is, with model testing, a better and better model of predicting the dependent variable of sport success can be constructed and utilized. Consuming sport is a science, a science that makes sense. Noise can be identified and avoided. Error can be minimized. Science, the clear construction of a model explaining behavior can be constructed, quantified, measured and approach perfection.

Sport, they argue, is unlike either games of chance or any other facet of life that is ruled by, or overly affected, by chance. In so doing, they promote a way of thinking that discounts, and devalues chance and believes that it is possible with sufficient effort to predict future events.

If indeed this brief look at the cognitive structures of a group of Avid fans who see the world dualistically and use abstraction, rationality and positivism as a collective approach, what predispositions does it point towards and in sum what is

the import of a fanship habitus that includes not only a specific social location and prevalence of practices but that cognitive structure as well?

The seemingly benign and often gratifying activity that is sport consumption appears to predispose its Avid adherents to a life of separation from others as they pursue analytical control over them. In valuing reason over emotion and as they turn people and events into numbers, all in the quest to be a better or smarter consumer of sport than some other, a detached judgmental observer quality becomes part of fanship habitus. Potential predispositions can include support for traditional or hegemonic masculinity, covert racism as well as sexism. The joy of sport consumption may mask a subtle and among adherents a deniable habitus or second nature that actually inhibits human contact, understanding and connection. The application of habitus to the field of sport as well as methodologically triangulating the field through blending both quantitative and qualitative research is indebted to Bourdieu's approach and insight. We are left now to further this investigation of how this habitus, born of the ubiquity and agentic flexibility of the field of sport, affects individuals, interactions and social structures much as Bourdieu invited us to do across multiple manifestations of human expression.

Chapter 16
Quantifying Habitus: Future Directions

William C. Cockerham and Brian P. Hinote

Abstract Bourdieu's concept of the habitus is the centerpiece of his explanation of social behavior. He uses the term to represent the cognitive map or set of perceptions that routinely guides and evaluates a person's choices and behavioral options. The habitus consists of enduring dispositions toward action deemed appropriate in particular social situations and settings, including habitual ways of acting when performing routine tasks. The influence of exterior social structures and conditions are incorporated into the habitus, as well as the individual's own inclinations, preferences, and interpretations. As a subjective construct, the concept of the habitus represents a methodological challenge in quantifying as it seems to involve both dispositions toward action (as reflected in observable behavior) and the influence of the wider society (exterior social structures) on the individual.

Bourdieu's approach, as seen in *Distinction*, was to utilize correspondence analysis to plot how preferences in music, art, cooking, and the like clustered along class lines to constitute distinctive patterns of taste (social spaces). Although similar to cluster analysis, correspondence analysis identifies relationships between variables more efficiently and reduces the potential for instability in the results. However, correspondence analysis cannot be utilized to test hypotheses, so in this chapter we suggest the use of multilevel modeling techniques like hierarchal linear modeling (HLM) to measure the effects of habitus on social behavior. We argue that HLM simultaneously examines the interaction between variables that describe individuals at one level and structural entities at the next and sequentially higher levels, depending on the variable's conceptual location in a structural hierarchy.

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16.1 Introduction

The purpose of this chapter is to suggest a method for quantifying Bourdieu's concept of the habitus. The habitus is the centerpiece of his explanation of social behavior and arguably represents his most important theoretical contribution. "Habitus" is the term Bourdieu employs to represent the customary perceptions people use to determine their behavioral dispositions. The habitus refers to a subjective style of thinking and perceiving characteristic of particular people and social classes. It consists of enduring dispositions toward action internalized by individuals and the groups and classes to which they belong, including habitual ways of acting when performing routine tasks. As a subjective construct, the concept of the habitus represents a methodological challenge in quantifying, but given the increasing use of the concept in sociology – such a methodology is needed. We will first examine Bourdieu's notion of the habitus, followed by a brief discussion of his methodological approach and our suggestions for quantifying the concept.

16.2 The Habitus

The concept of the habitus originates with Edmund Husserl ([1952] 1989: 266–293) who used the term to describe habitual action that is intuitively performed, such as eating soup with a spoon. The concept was expanded by Bourdieu (1977a: 72–95) to encompass a much wider range of behavioral dispositions, including those that are mediated through external social structures. Bourdieu's ideas about the habitus partially evolved from his early anthropological fieldwork among Kabyle peasants in Algeria in the late 1950s (Lane, 2000; Swartz, 1997). He observed that the immediate demands of obtaining subsistence prevented the Kabyle from moving beyond a practical view of their everyday world toward a more reflexive understanding of the logic of their behavior and possible behavioral alternatives. "The habitus, in this case," observes Lane (p. 195), "describes the process whereby a set of norms and conventions becomes sedimented into a structure of dispositions and expectations of 'practical taxonomies' of ways of seeing and doing in the world that are neither entirely conscious nor wholly unconscious but rather 'practically' oriented towards certain implicit goals." The conduct of Kabyle village and economic life remained steadfastly routine and little different from the past at the time Bourdieu undertook his research. His observations helped him understand the manner in which a habitus governed the daily routines he observed.

However, Bourdieu's concept of the habitus did not just rest on Husserl's ideas and his own analysis of deeply embedded peasant folkways. Rather, his concept was also shaped from his critiques and embrace of various aspects of French structuralism, along with the influence of Panofsky's ideas about the function of "mental habits" and "habit-forming forces" (Swartz, 1997: 102). Bourdieu came to see the habitus as a structuring structure generating action instead of simply a reflection

of structure in the behavior of the individual. Bourdieu (1996a), in fact, strongly opposed the idea that people were mere bearers (using the German term *Trägers* to denote carrying a heavy burden) of structure. Consequently, he called for the rejection of purely mechanistic theories of social behavior.

So while the habitus internalized objective social conditions in the mind and body and typically provided practical dispositions toward action that were consistent with the norms and culture of the prevailing social order, it was also capable of being creative. Bourdieu (Bourdieu & Wacquant, 1992: 135) suggested that habitus could be thought of "as a sort of spring that needs a trigger and depending upon the stimuli and structure of the field [social setting], the very same habitus will generate different, even opposite, outcomes." Bourdieu (1990b: 35) defined the habitus as a system "of durable, transposable dispositions, structured structures predisposed to operate as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations in order to attain them." Put another way, the habitus serves as a cognitive map that routinely guides and evaluates a person's choices and options. It provides enduring dispositions toward acting deemed appropriate by people and society in particular social situations and settings. Included are dispositions that can be carried out without giving them much thought in advance as they are simply habitual ways of acting when performing routine tasks.

The influence of exterior social structures and conditions are incorporated into the habitus, as well as the individual's own inclinations, preferences, and interpretations. The dispositions that result not only reflect established normative behavior, but they also include action that is habitual and even intuitive. Through selective perception the habitus molds aspirations and expectations into what Bourdieu calls "categories of the probable" that impose perceptual boundaries on dispositions and the potential for action. "As an acquired system of generative schemes," states Bourdieu (1990b: 55), "the *habitus* makes possible the free production of all the thoughts, perceptions and actions inherent in the particular conditions of its production—and only those." Thus the habitus has perceptual boundaries. One can only know what one knows and act accordingly. At the center of Bourdieu's understanding of the habitus, as Lane (2000: 194) points out, is its doxic relation to the world, constituting a practical sense of what can or cannot be reasonably accomplished or does or does not fall within a culturally determined range of possibilities.

The dispositions constituting the habitus are formed through socialization and experience, with class circumstances providing the social context within which this process occurs. The internalization of class conditions and their transformation into personal dispositions toward action makes possible the sharing of a class-based habitus by people who belong to the same social class. As Bourdieu (1977a: 85) explains: "Even though it is impossible for *all* members of the same class (or even two of them) to have the same experiences, in the same order, it is certain that each member of the same class is more likely than any member of another class to have been confronted with the situations most frequent for members of that class."

Since the habitus tends to reproduce those dispositions, actions, and social outlooks consistent with the conditions under which it is produced, most people and classes respond to situations in a manner consistent with their social background. Personal style, in Bourdieu's (1990b) view, is never more than a deviation from the style of a class that relates back to the common style by its difference. Consequently, class circumstances and the manner in which class is reflected through socialization and experience are decisive in the formation of the dispositions constituting the habitus.

The process of experience also rescues the concept of the habitus from the charge of determinism (Cockerham, 2005). Through experience, the habitus can change or adjust dispositions toward action. Situations vary, so the habitus varies to fit the situation and, as noted, be creative if warranted. Bourdieu (Bourdieu & Wacquant, 1992: 133), moreover, observes that habitus is not the deterministic fate that some critics read into it; rather, "it is an *open system of dispositions* that is constantly subjected to experiences and therefore constantly affected by them in a way that either reinforces or modifies its structures." The habitus is durable but not eternal. But Bourdieu (Bourdieu & Wacquant, 1992: 133) adds that experiences will usually confirm the habitus because most people are statistically bound to encounter circumstances that tend to agree with those that originally fashioned their habitus.

One of the principal functions of the habitus that assists in its quantification is that it provides a unity of style linking the practices of a single agent or class of agents (Bourdieu, 1984a, 1998). The habitus accomplishes this by manifesting classificatory schemes, classificatory principles, and distinctive tastes. As Bourdieu (1998: 10) explains: "The principle of classification thus put into play is genuinely *explanatory*." He observes that classificatory principles do not merely describe a set of classified realities, but, like the taxonomies of the natural sciences, they specify the determinant properties that "allow for the prediction of the other properties and which distinguish and bring together agents who are as similar to each other as possible and as different as possible from members of other classes, whether adjacent or remote" (Bourdieu, 1998: 10). Bourdieu, for example, finds that the habitus retranslates the intrinsic and relational characteristics of a social position into a lifestyle reflecting a unitary set of choices of persons, goods, and practices that differentiates itself from the choices of persons in other classes. Bourdieu (1998: 8) states: "Habitus are generative principles of distinct and distinctive practices—what a worker eats, and especially the way he eats it, the sport he practices and the way he practices, his political opinions and the way in which he expresses them are systematically different from the industrial owner's corresponding activities."

The dispositions generated by the habitus also tend to be compatible with the behavioral parameters set by the wider society and/or some social group or class therein; therefore, usual and predictable modes of behaving – not unpredictable novelty – typically prevails in daily life. Measuring a person's usual dispositions toward action in social surveys thus allows the researcher to quantify the practices of individual agents and classes that characterize habitus with consistency. Cockerham (2005) notes, for instance, that dispositions toward diet, exercise,

smoking, and alcohol use consistently reflect the manner in which habitus generates health lifestyle distinctive to people in particular social classes. These lifestyle practices can be quantified by assigning a numerical value to each outcome, such as whether a person smokes, is a former smoker, or does not smoke, so that class and other patterns can be determined. Before suggesting a method to pursue quantification of the habitus, we will next examine Bourdieu's approach to measurement.

16.3 Bourdieu's Approach to Quantification

Bourdieu used correspondence analysis as the primary statistical method in his masterwork *Distinction* (1984a) in which he most fully demonstrated his concept of habitus. The method allows researchers to organize data, observe similarities and differences between categories of variables, and graphically depict relationships (Greenacre & Blasius, 1994). Correspondence analysis can therefore be described as a descriptive and exploratory multidimensional scaling technique capable of sorting a multiplicity of variables into plots. The strength of the technique lies in its capability to furnish a spatial display of relationships simultaneously.

As a scaling procedure for nominal scaled data, correspondence analysis uses the columns and rows of a two or more dimensional table of contingency as an input matrix. Different categories of one variable (column variables), such as class, age, or race can be related to a multiplicity of descriptor variables (row variables), such as different behavioral practices. Correspondence analysis has some similarity to factor analysis in that it produces a set of orthogonal vectors to locate different categories in multidimensional space. However, in contrast to factor analysis, where the main emphasis is on reducing complexity, the focus of correspondence analysis is to determine complexity. It accomplishes this by displaying a comprehensive pattern of the interrelationships between all categories of a set of variables. Correspondence analysis is also similar to cluster analysis, but it identifies complex patterns of behavior in relation to sociodemographic variables more efficiently and quickly, while reducing the potential for instability by using a fixed algorithm.

According to Bourdieu (1984a: 261): "Analysis of correspondence makes it possible to isolate, through successive divisions, different coherent sets of preferences stemming from distinct and distinctive systems of dispositions, defined as much by their interrelationships as by the relationship between each of them and its social conditions of production." This is seen in the plots produced by correspondence analysis that show how dependent variables cluster in particular relationships with independent variables and the relative strengths and weaknesses of those relationships as determined by their spatial distance from each other. This is also seen, for example, in Figures 11 and 12 in *Distinction* (p. 262), where Bourdieu plots the spatial distribution of the economic and cultural capital of his survey respondents through the distribution of cultural preferences in music, art, food preparation, etc. in relation to various occupations and professions.

Bourdieu (1984a) relied on correspondence analysis to formulate his concept of "social space" as a structure representing the habitus. He did this by conceptualizing what he defined as a "space of social positions" (class) and a "space of lifestyles" (practices) into one space that can be displayed and interpreted simultaneously. The closer a class was to a lifestyle practice, the greater the affinity for it and the more distant the less the affinity. Spatial distances thus depicted social distances and in doing so reflected the boundaries of the habitus of the various classes.

Unfortunately, a limitation of correspondence analysis is that it can be used only for displaying relationships, not hypothesis testing. The merit of the method is that it allows the researcher to "see" his or her data by graphically depicting the spatial/social distances between categories of variables. While it can be used to formulate hypotheses for subsequent testing, it is unable to actually test those hypotheses by providing levels of statistical significance. Other statistical techniques are therefore required for testing hypotheses. These techniques need to be able to measure relationships having predictive power exclusive of the effects of other variables. Several statistical models such as regression analysis and path or structural equation modeling exist that can accomplish this. However, Bourdieu's concept of the habitus is heavily invested in the influence of exterior social structures on the habitus. Being able to test the effects of structural characteristics on a dependent variable requires the construction of independent variables having properties indicative of such structures. That is, structural variables need to represent conditions beyond the level of individuals. For example, measures of neighborhood conditions should reflect characteristics unique to the neighborhood like basic utilities and crime rates, as well as parks, recreational facilities, pharmacies, hospitals, restaurants, and food stores, not the aggregated sums of the characteristics of the individuals living in such neighborhoods. It is therefore necessary to use multilevel modeling techniques, a topic that will be discussed in the next section.

16.4 Multilevel Modeling

Multi-level modeling, also referred to as hierarchical linear modeling, mixed effect analysis, mixed effect modeling, random effects analysis, and random effects modeling, first emerged in the academic literature during the late 1980s and early 1990s. Confusion has often surrounded this methodological approach, both because of its different names and its mathematical complexity. However, multilevel modeling is becoming increasingly accessible to quantitative researchers who are not necessarily mathematicians or experts in statistical theory. As a result, its popularity has grown in recent years, with the number of papers employing a multilevel analytic approach increasing substantially in various disciplines ranging from the natural sciences and medicine to the social sciences and sociology (Twisk, 2006).

Multilevel analysis examines the interaction between variables that describe individuals at one level (level 1), structural entities (like households) at the next level (level 2), and sequentially higher levels (like neighborhoods, communities,

social classes, etc.), if necessary, depending on the variable's conceptual position in a structural hierarchy. Of course, researchers need to plan in advance and include hierarchical-level variables in their data or obtain data sets for analysis that have such measures.

Multilevel analysis was first employed in educational research where researchers wanted to assess the classroom performance of students. In utilizing earlier, conventional statistical methods, researchers soon came to the realization that singular observations of student performance were not individually independent observations. After all, individual students are situated within classes, classes are nested within schools, and schools are organized within school districts, systems, etc. This may seem like a simple observation, yet it is nevertheless insightful because of the implications it holds for conventional statistical analysis. Standard regression analysis and similar techniques assume that individual observations are independent of one another, making them inappropriate for analyzing a research problem like student performance in particular classes and schools. Therefore, if data are nested and the normal regression assumption of independent observations is violated, multilevel analysis in one form or another is an appropriate mode of analysis (Twisk, 2006).

Individuals constituting a population under study can be organized into families or households, which are in turn nested within census tracts or communities. These structures reflect the general composition of human social life, so it therefore makes sense to adopt methodological approaches that consider these structures fundamental dimensions of human behavior. Behavior is intimately affected by the structures within which we live and Bourdieu's concept of the habitus requires us to consider the effects of these structures. It likewise follows that we employ multilevel analytic techniques in quantifying this important sociological concept.

16.5 Moving Toward Quantifying the Habitus

As previously noted, quantifying Bourdieu's concept of the habitus poses a significant challenge for researchers. This is because it is a subjective entity influenced by subjective processes specific to the individual (e.g., socialization, experience) and society (e.g., norms, values) that can be grounded in objective, material conditions (e.g., class position, poverty, neighborhood infrastructure). Consequently, it is helpful to briefly discuss the dynamics of the concept. Bourdieu developed his notion of the habitus to overcome the classical agency-structure problematic in sociology (Swartz, 1997), and the agency-structure dialectic represents a useful starting point for quantifying the habitus. Max Weber's ([1922] 1978) formulation of life choices and life chances also provide further insight concerning the habitus. When Bourdieu speaks of the internalization of class conditions and their transformation into personal dispositions toward action in the habitus, he is describing conditions similar to Weber's concept of life chances that determine materially, socially, and culturally what is probable, possible, or impossible for a member of

a particular social group or class (Swartz, 1997). People are able to choose their behavior, but their choices (agency) can be either constrained or enabled by their life chances (structure). Weber's concept of life choices and life chances are proxies for agency and structure, and his formulation posits choices and chances interacting in a dialectical fashion, each enabling and constraining the other in the generation of social action, while never breaking free of one another.

Agency and structure may be conceptualized within a broad dialectical relationship, with each component in turn affected and often transformed by the other. Agency is defined as "a temporally embedded process of social engagement, informed by the past, but also oriented toward the future and toward the present" (Emirbayer & Mische, 1998: 963), and generally refers to action undertaken by individuals. Structure, on the other hand, refers to schemas (rules and procedures) and resources (human and non-human) that empower or constrain social action and tend to be reproduced by that action (Sewell, 1992: 19). Therefore, agency is essentially an intrinsic quality of the individual, while structure is originates in the external social world (although it is internalized by the individual). While this is a general and well-established conceptualization in sociology, it is nonetheless important to remember that Bourdieu's concept of the habitus is based on this classical problematic. Further, the notions of agency and structure give rise to the ideas of life choices and life chances as ways to conceptualize the interchange between society and the individual, and this choice-chance dichotomy also moves us closer to understanding how the habitus operates.

The single most important variable in relation to understanding the dispositions produced by the habitus in Bourdieu's conceptualization is class circumstances. Class is the key variable for Bourdieu because it serves as the basis for other differentiating forces related to lifestyle, consumption, and other types of behaviors. Yet conventional measures of social class like income, education, and occupation are characteristics of individuals as well as classes and need to be viewed in combination with each other to constitute a structural variable that produces top-down distinctions in the quality and form of dispositions generated by the habitus. Bourdieu dealt with this situation by formulating his notion of "distance from necessity." He points out that the more distant a person is from having to focus on obtaining the basic economic necessities in life (e.g., food, shelter, clothing, income, etc), the greater the freedom and time that person has to develop and refine personal tastes in line with a more privileged class status. Persons lower in the class hierarchy tend to adopt the tastes consistent with their class position in which acquiring items of necessity is more essential. As Bourdieu (1984a: 177) puts it:

> The true basis of the differences found in the area of consumption, and far beyond it, is the opposition between the tastes of luxury (or freedom) and the tastes of necessity. The former are the tastes of individuals who are the product of material conditions of existence, defined by distance from necessity, by the freedoms or facilities stemming from possession of capital; the latter express, precisely in their adjustment, the necessities of which they are a product.

What does this idea have to offer in operationalizing the habitus? Possibly a great deal. If researchers can standardize a method for measuring a family or social group's distance from necessity, they would have a useful collective measure of

class standing. Such a measure has not been fully developed, but some potential markers for distance from necessity could include acquisition and possession of consumer products at the family or household level like the number of automobiles, computers, televisions, etc. To take this analysis a step further, researchers, for example, could examine not only the presence and number of these consumer items, but also other indicators of consumption such as the brand names or prestige associated with those consumer goods. After all, Bourdieu notes that such patterns and indicators of consumption serve as significant differentiating markers within and among social groups – even those with similar habitus configurations. Depending on the structure of the conceptual model, such a measure would likely be most appropriate as a level-two structural indicator, as it differentiates class attributes above the individual level but below the neighborhood or community level.

Other important considerations suggested by Cockerham's (2005) model of health lifestyles include age, gender, and race and/or ethnicity because each variable can be related to behavioral dispositions generated by the habitus. Collectivities and living conditions are likewise important. Collectivities are collections of actors linked together through particular social relationships, such as kinship, work, religion, and politics. Their shared norms, values, ideals, and perspectives make up intersubjective "thought communities" that reflect a particular view of the social world (Zerubavel, 1997). As such, collectivities have the potential to act as significant influences on behavioral dispositions. Also, ideology is often linked to collectivities and collective ideological orientations may be useful in assessing the impact of specific groups on individual-level dispositions. For example, what are the core values of a particular religious or church group? Does a particular kinship network, trade union, or political interest group exert a significant influence on the behavioral dispositions of a specific group of individuals? These are questions that the researcher must consider in quantifying the habitus if relevant to her or his particular research question.

Living conditions are also important as the conditions in which an individual lives can have important effects on his or her life and dispositions. Such conditions include housing quality, access to basic utilities, neighborhood characteristics like parks and convenient banks, grocery markets, and stores, along with personal safety. These living conditions also indicate an individual or family's distance from necessity, and as such, their class standing, making these measures potentially useful structural indicators. Researchers should employ items to measure basic housing characteristics like hot water access, electricity, and indoor plumbing, but also more specific items like the number of bathrooms within a dwelling or the number of recent accidents within the home to distinguish between relatively safe, secure environments and those that are potentially harmful or dangerous. Neighborhood characteristics like the distance to the nearest park or recreation area and the safety and security of those facilities are also important dimensions of living conditions, reflecting the general character of an environment and thus it's potential to influence socialization and social life in general.

Another way to measure the habitus includes subjective responses denoting the intersection of individual experience and structural variables like class or living

conditions. That is, researchers may ask respondents about the subjective experience of their class standing. These items would include questions about where an individual believes he or she stands within the broader social hierarchy or impressions of relative economic resources like whether the person's income is just enough to survive, enough to buy relatively limited consumer goods, or enough to purchase major and often expensive consumer products.

16.6 Quantifying the Habitus

Our suggestion for quantifying the habitus is based on Cockerham's (2005) model of health lifestyles. In order to determine the dispositions generated by the habitus, the individual's dispositions toward action need to be obtained. In the case of health lifestyles, such measures as the frequency and amount of alcohol consumed, the person's smoking status, and specifics about diet and exercise, along with other measures like preventive health checkups and seat-belt use all qualify as behavioral dispositions. These practices may be positive or negative for health, but they nonetheless comprise a person's overall pattern of health lifestyles. Action or inaction with respect to a particular health practice leads to its reproduction, modification, or nullification by the habitus through a feedback process. This is consistent with Bourdieu's (1984a) assertion that when dispositions are acted upon they tend to reproduce or modify the habitus from which they are derived.

Given that the habitus reflects the internalization of exterior structures, it is necessary to obtain measures of such structures, especially (1) class circumstances but also (2) age, gender, and to a lesser extent race and/or ethnicity as Cockerham (2007) discusses their relative importance and suggests ways they can be categorized as structural variables. Additionally data on (3) collectivities and (4) living conditions are important because these four categories of structural variables provides the social context for the socialization and experience of individuals that, in turn, are the basis upon which the habitus originates. Bourdieu's notion of the habitus represents a novel and logical conceptualization of the internalization of external structures in the mind and perceptual processes of the individual, so it is fundamental that the influence of these structures on the individual's behavioral dispositions be determined.

Consequently, we suggest the use of hierarchal linear modeling (HLM) as developments in statistics now exist that provide efficient estimation for a wider range of applications than previously possible (Raudenbush & Bryk, 2002). These applications can not only be used for determining relative levels of influence for health lifestyles, but be used for other research topics and questions. The advantage of HLM is that it makes it feasible to test hypotheses about relationships occurring at different levels (individuals, households, communities, social classes, etc.) and assess the amount of variation explained at each level. By comparing changes in the regression equations, the relative effects of each level of variables on behavioral outcomes can be simultaneously determined. This approach can thus be followed to determine the manner in which the habitus generates dispositions toward action.

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