

CROSS-CLASS FAMILIES
– A SOCIAL CAPITAL PERSPECTIVE

by

SHASHA ZHANG

张莎莎

A thesis submitted to
the University of Birmingham
for the degree of
DOCTOR OF PHILOSOPHY

Institute of Applied Social Studies

School of Social Policy

College of Social Sciences

University of Birmingham

April 2013

UNIVERSITY OF
BIRMINGHAM

University of Birmingham Research Archive

e-theses repository

This unpublished thesis/dissertation is copyright of the author and/or third parties. The intellectual property rights of the author or third parties in respect of this work are as defined by The Copyright Designs and Patents Act 1988 or as modified by any successor legislation.

Any use made of information contained in this thesis/dissertation must be in accordance with that legislation and must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the permission of the copyright holder.

ABSTRACT

The idea of cross-class families has been controversial over the last three decades. In class analysis literature, the debate was intertwined with issues on the cross-gender class comparison and women's social class. This thesis will try to deal with the ambiguity in previous cross-class-family studies, such as the class scheme selection, the measurement methods, which distracted a lot of energy from developing the knowledge of cross-class families. Through the social capital perspective, this thesis examines three key critiques to cross-class families: (1) All families are class homogeneous; (2) Sharing resources is equivalent to class similarity; (3) The occupations of the female and the lower-occupation partners have no empirically significant contribution to their own social class. Through the latest waves of the British Household Panel Survey (BHPS) and an updated British occupational class scheme, National Statistics Socio-economic Classification (NS-SEC) 2000, the thesis examines the three matters. It concluded that there are substantial amount of families where the male and female partners were different significantly in terms of social capital and social class. Couples share social resources may have significant difference in social class. This sharing may only suggest correlations. The occupations of the female and lower-occupation partners should not be ignored in the measurement of their own socio-economic positions. Their contributions to the male and higher-occupation partners' socio-economic positions should also not be overlooked.

This thesis is dedicated to my grandparents, Mei-Xuan Niu (钮梅轩) and Bao-Yu Zhang (张宝玉), who raised me but passed away in my teens, also to my grandmother, Zhi-Xian Qiang (羌志贤) and my great grandmother, Shu-Yuan Yang (杨淑媛), who departed from me in China during my PhD study in England.

ACKNOWLEDGEMENT

I would like to express my acknowledgement and heartfelt gratitude to all of my supervisors during the PhD study. All of them have been encouraging, patient and supportive. Professor Yaojun Li and Professor David Marsh gave me the opportunity of this PhD study. Yaojun's enthusiasm on social capital stimulated my interest in social capital research. He generously taught me statistics and detailed research techniques. His support and help has never stopped.

Professor John Holmwood inspired me to research cross-class families. He generously shared his original ideas on cross-class families and social capital with me. I would like to acknowledge him for all of his stimulating suggestions and comments which helped me to develop the key elements of the thesis. This thesis could not have been completed without him.

I have also received numerous kindnesses from Doctor Sin Yi Cheung who has always been around when I have had problems with statistics during the writing of the first data analysis chapter. I am especially grateful for her patience and suggestions.

I am also deeply indebted to Professor Stephen McKay who took over the supervision from Doctor Cheung at the final stage of my study. This thesis could not have been completed without his support. He has always been encouraging and humorous. I am especially grateful

that he always answers every single question I ask.

This research analyses the British Household Panel Survey (BHPS). I thank the data collectors, the Economic and Social Research Council (ESRC) UK Longitudinal Studies Centre and the Institute for Social and Economic Research, and the funder, the ESRC. A special thanks to the staff of the BHPS, especially Doctor Jonathan Burton, Doctor Emanuela Sala, Professor Nick Buck and Mr. John Brice. Without their advice during and after the training sessions, this research would have taken much more time. I am especially obliged to Mr. Yang Lu, Ms. Sheila Garvin and Ms. Wendy Ijioma for the proof-reading. Thanks also to Doctor Po-Wei Chen, Doctor Xiaodong Lin for their genuine friendship and support. I would like to acknowledge and extend my gratitude to the Doctor Harriet Clarke, Ms. Pat Wright, Ms. Ann Dunbar and Ms. Alison Paris, whose kindness and patience was of great help. I am also grateful to Professor Mairtin Mac an Ghaill, Doctor Andrew Knops and Professor John Doling for their interest and valuable hints. Particular thanks go to the two examiners, Doctor Wendy Bottero and Professor Karen Rowlingson, for their time and invaluable comments.

Most especially to my parents, Wei Qiang (羌薇) and Xiao-Dong Zhang (张晓东), my parents-in-law, Xiao-Feng Huang (黄晓峰) and Jian-Ping Lu (卢建平), my husband, Yang Lu (卢阳), and the whole family who have supported me with their love and trust throughout my studies.

TABLE OF CONTENT

CHAPTER ONE	INTRODUCTION	1
CHAPTER TWO	THE DEBATE OF CROSS-CLASS FAMILIES IN CLASS ANALYSIS	7
2.1	Introduction	7
2.2	The debate of cross-class families.....	7
2.2.1	The conventional approach of social class measurement.....	7
2.2.2	The critiques about the conventional approach.....	9
2.2.3	The appearance of ‘cross-class families’ and other alternative approaches for the measurement of social class	14
2.2.4	Goldthorpe defended for the conventional approach for the first time	16
2.2.5	Replies to the defence	19
2.2.6	Goldthorpe defends the conventional approach for the second time.....	20
2.2.7	The fading of the debate.....	22
2.3	Literature ‘gaps’	24
2.3.1	Social changes.....	24
2.3.2	No consensus on the definition and measurement of cross-class families	27
2.3.3	Never tried the social capital perspective.....	28
2.3.4	Unfinished debate.....	31
2.4	Social class, social capital and social position	31
2.5	Research questions	34
2.6	Summary	36
CHAPTER THREE	METHODOLOGY FOR ANALYSING CROSS-CLASS FAMILIES	37
3.1	Introduction	37
3.2	Methods of analysing cross-class families	37
3.3	Research design.....	42
3.4	Data: the British Household Panel Survey (BHPS)	43
3.4.1	The advantages of BHPS.....	45
3.4.2	Characteristics of the sample.....	46
3.4.3	Weighting	49
3.5	Ethics.....	50
3.6	Summary	51
CHAPTER FOUR	CONCEPTUALISING AND MEASURING CROSS-CLASS FAMILIES.....	52
4.1	Introduction.....	52
4.2	Conceptualising cross-class families.....	52
4.2.1	Defining ‘cross-class’	54
	<i>Literature review</i>	54

	<i>What is 'cross-class'?</i>	66
4.2.2	Defining 'families'	74
	<i>'Families' rather than 'households'</i>	74
	<i>Both married and cohabiting couples</i>	75
	<i>Nuclear families</i>	76
	<i>Heterosexual families</i>	76
4.2.3	Defining 'cross-class families'	77
4.3	Measuring cross-class families.....	77
4.3.1	Unit of analysis	78
4.3.2	Measuring the social classes of individuals	81
	<i>Methods</i>	81
	<i>The distribution of the social classes of individuals</i>	84
	<i>Class VIII: currently not in the labour force or never worked</i>	89
4.3.3	Measuring family class compositions	94
	<i>Methods</i>	94
	<i>The distribution of cross-class families</i>	97
	<i>The distribution of cross-class families in different age groups</i>	101
4.4	Summary	104
CHAPTER FIVE CONCEPTUALISING AND MEASURING SOCIAL CAPITAL		107
5.1	Introduction	107
5.2	Conceptualising social capital	107
5.2.1	Literature review	108
	<i>Pierre Bourdieu</i>	108
	<i>Robert Putnam</i>	109
	<i>James Coleman</i>	111
	<i>Nan Lin</i>	112
5.2.2	Defining 'social capital'	115
5.3	Measuring social capital.....	115
5.3.1	Model	116
	<i>Social networks</i>	116
	Informal and formal social networks.....	116
	The relationship with the partner was excluded	118
	Size.....	119
	<i>Accessibility and mobilisability</i>	120
	<i>Job seeking and promotion resources</i>	121
	Structural level	122
	Compositional quality	123
	<i>Summary</i>	124
5.3.2	Methods.....	125
5.3.3	Indicators of social capital.....	128
	<i>Social capital embedded in friendship social networks</i>	129
	<i>Social capital embedded in neighbourhood social networks</i>	137

	<i>Social capital embedded in civic participation social networks</i>	139
5.3.4	Generating three social capital variables through factor analysis	142
	<i>Factor extraction</i>	142
	<i>Factor rotation</i>	144
5.3.5	The distribution of three social capital variables	149
5.4	Summary	152
CHAPTER SIX SOCIAL CAPITAL HETEROGENEITY IN CROSS-CLASS FAMILIES		154
6.1	Introduction	154
6.2	Literature review	156
6.2.1	Relationships between social capital and social class	156
	<i>Friendship social capital and social class</i>	159
	<i>Neighbourhood social capital</i>	160
	<i>Civic participation social capital</i>	160
	<i>Summary</i>	162
6.2.2	Differences in social capital between men and women	162
	<i>Informal social capital (i.e. friendship social capital and neighbourhood social capital)</i>	162
	<i>Formal social capital (i.e. civic participation social capital)</i>	163
	<i>Summary</i>	165
6.2.3	Social capital heterogeneity in cross-class families	165
6.3	Methods	166
6.4	Preliminary analyses	171
6.4.1	Relationships between social capital and social class	171
6.4.2	Differences in social capital between men and women in all families	179
6.4.3	Differences in social capital between men and women in seven types of families ..	184
6.4.4	Hypotheses	189
6.5	Social capital heterogeneity within cross-class families	189
6.5.1	Social capital heterogeneity in all families	191
6.5.2	Social capital heterogeneity in seven types of families	192
6.6	Summary	202
CHAPTER SEVEN SOCIAL CAPITAL MUTUAL INFLUENCES IN CROSS-CLASS FAMILIES		209
7.1	Introduction	209
7.2	Literature review	211
7.3	Methods	214
7.4	Preliminary analyses	217
7.5	Social capital mutual influences in cross-class families	224
7.6	Summary	235
CHAPTER EIGHT THE OCCUPATIONS OF THE FEMALE AND LOWER-OCCUPATION PARTNERS MATTER		240
8.1	Introduction	240

8.2	Literature review	242
8.3	Methods.....	252
8.4	Preliminary analyses	259
8.4.1	The importance of women and the lower-occupation partners' occupations in all families 259	
8.4.2	The importance of women and the lower-occupation partners' occupations in three types of families	268
8.5	The significance of the impact of the female and lower-occupation partners' occupations on their own and their partners' social capital.....	275
8.5.1	The significance of the impact of women's occupations on their social capital.....	275
8.5.2	The significance of the impact of women's occupations on their male partners' social capital 281	
8.5.3	The significance of the impact of the lower-occupation partners' occupations on their own and their partners' social capital	285
8.6	Summary	286
CHAPTER NINE CONCLUSION		291
9.1	Introduction	291
9.2	Findings.....	291
9.2.1	Patterns of cross-class families	292
9.2.2	Patterns of social capital.....	293
9.2.3	Social capital heterogeneity in cross-class families	293
9.2.4	Social capital mutual influences in cross-class families.....	295
9.2.5	The occupations of the female and lower-occupation partners matter	296
9.3	Original contributions	298
9.3.1	An up-to-date dataset	298
9.3.2	An up-to-date class scheme.....	299
9.3.3	Introducing concept of social capital into class analysis.....	301
9.3.4	Empirical evidence on the problems of the conventional and dominance approach.....	302
9.4	Limitations	303
9.5	Future research	306
9.6	Conclusion	306
Notes		308
Chapter Four Conceptualising and Measuring Cross-class Families		308
Chapter Five Conceptualising and Measuring the Social Capital		319
Chapter Six Social Capital Heterogeneity in Cross-class Families.....		319
Chapter Seven Social Capital Mutual Influences in Cross-class Families.....		335
Chapter Eight The Occupations of the Female and Lower-class Partners Matter.....		339
GLOSSARY		356
APPENDIX.....		359
BIBLIOGRAPHY		381

LIST OF FIGURES

Figure 2.1 Employment rates by sex in the UK from 1971 to 2011.....	25
Figure 2.2 Economic inactivity rates by sex in the UK from 1971 to 2011	26
Figure 4.1 Two selection processes of defining ‘cross-class’ using the Registrar General’s Social Class by Britten and Heath	55
Figure 4.2 Two selection processes of defining ‘cross-class’ using the market research classification by Britten and Heath	57
Figure 4.3 Two selection processes of classification for cross-gender class comparisons using the Hope-Goldthorpe scale by Goldthorpe	61
Figure 4.4 The NS-SEC	68
Figure 4.5 The employment relation coordinate	69
Figure 4.6 The categorisation of the NS-SEC.....	70
Figure 4.7 The age distribution of married and cohabiting men and women in Class VIII, 2008	92
Figure 4.8 The employment status of married and cohabiting men and women in Class VIII, 2008	93
Figure 4.9 The matrix of family class composition.....	96
Figure 4.10 Family class composition distributions in four age groups of the male partner, 2008.....	102
Figure 5.1 The model of social capital.....	117
Figure 5.2 Scree plot for the factor analysis, 2008.....	144
Figure 6.1 Boxplots for distributions of social capital in eight social classes using the current-job NS-SEC, 2008.....	172
Figure 6.2 Boxplots for distributions of social capital in eight social classes (using the current-job NS-SEC) by sex, 2008	181
Figure 6.3 Boxplots for distributions of social capital by sex in seven types of families (measured through the current job), 2008.....	185
Figure 6.4 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families, 2008.....	192
Figure 6.5 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families in seven types of families (measured through the current job), 2008.....	194
Figure 7.1 Scatterplots of the male and female partner’s social capital, 2008.....	218
Figure 7.2 Scatterplots of the male and female partner’s social capital by family types (measured through the current-job version of the NS-SEC), 2008	225
Figure 8.1 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex, 2008.....	261

Figure 8.2 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class current-job version of the NS-SEC), 2008.....	269
Figure 8.3 A summary of Tables 8.1 and 8.2, the impact of women and the lower-occupation partners' occupational classes on their own and their partners' social capital	288
Figure n.4.1 The full-version of the NS-SEC.....	308
Figure n.4.2 The analytic class variables of the NS-SEC.....	309
Figure n.4.3 The pie chart of the age distribution of married and cohabiting men and women in Class VIII defined by the most-recent-job NS-SEC, 2008	314
Figure n.4.4 The pie chart of the employment status of married and cohabiting men and women in Class VIII defined by the most-recent-job NS-SEC, 2008	315
Figure n.4.5 Family class composition distributions measured through the most-recent-job NS-SEC in four age groups of the male partner, 2008, row percentages	318
Figure n.6.1 Boxplots for distributions of social capital in eight social classes using the most-recent-job NS-SEC, 2008.....	324
Figure n.6.2 Boxplots for distributions of social capital in eight social classes (using the most-recent-job NS-SEC) by sex, 2008	326
Figure n.6.3 Boxplots for distributions of social capital by sex in seven types of families (measured through the most recent job), 2008	329
Figure n.6.4 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families in seven types of families (measured through the most recent job), 2008.....	331
Figure n.7.1 Scatterplots of the male and female partner's social capital by family types (measured through the most-recent-job version of the NS-SEC), 2008	335
Figure n.8.1 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex (measured through the eight-class most-recent-job version of the NS-SEC), 2008.....	341
Figure n.8.2 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex (measured through the eight-class current-job version of the NS-SEC), 2008.....	342
Figure n.8.3 Bar charts of the median social capital by their social classes by the social classes of their partners by sex (measured through the eight-class most-recent-job version of the NS-SEC), 2008.....	343
Figure n.8.4 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class most-recent-job version of the NS-SEC), 2008.....	344
Figure n.8.5 Bar charts of the median social capital by their social classes by the social classes of their individuals by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class current-job version of the NS-SEC), 2008.....	346
Figure n.8.6 Bar charts of the median social capital of individuals by their social classes by the social	

classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class most-recent-job version of the NS-SEC), 2008.....	348
Figure n.8.7 A summary of Tables n.9.1 and n.9.2, the impacts of women and the lower-occupation partners' occupational classes on their own and their partners' social capital	354

LIST OF TABLES

Table 3.1 BHPS sample characteristics, married and cohabiting heterosexual adult men and women, 2008	48
Table 4.1 The distribution of the social classes of individuals, 2008	84
Table 4.2 The distribution of two genders by social class, 2008	86
Table 4.3 The class distribution by sex, 2008	88
Table 4.4 The mean ages of men and women in eight social classes, 2008	90
Table 4.5 The family class matrix of married and cohabiting couples, 2008, total percentages (Weighted N=4458.6)	99
Table 4.6 The distribution of different types of family class composition, 2008, cell percentages	100
Table 5.1 Social capital indicators, and the Spearman's correlation coefficient for associations between social capital indicators and social class, 2008	130
Table 5.2 Factor loadings for social capital indicators onto three social capital factors, 2008	146
Table 5.3 Descriptive statistics of social capital of men and women, 2008	149
Table 6.1 Spearman's correlation for the association between social capital and the social class (using the current-job NS-SEC), 2008	178
Table 6.2 The Mann-Whitney test for differences in social capital between men and women, 2008	179
Table 6.3 Spearman's correlation for the association between social capital and the social class (using the current-job NS-SEC) by sex, 2008	183
Table 6.4 Wilcoxon signed-ranks tests for social capital heterogeneity in all families, 2008	193
Table 6.5 Wilcoxon signed-ranks tests for social capital heterogeneity in seven types of families (measured through the current job), 2008	196
Table 6.6 The Kruskal-Wallis tests and Jonckheere-Terpstra tests for differences and orders of median social capital heterogeneity in seven types of families (measured through the current job), 2008	200
Table 7.1 Spearman's correlation coefficients of the associations between the male and female partners' social capital, 2008	221
Table 7.2 Spearman's correlation coefficients of the associations between the male and female partners' social capital in seven types of families (measured through the current-job version of the NS-SEC), 2008	231
Table 8.1 MANOVA for the effects of own social classes and the male partners' social classes on women's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the current-job version of the NS-SEC), 2008 ...	278
Table 8.2 MANOVA for the effects of own social classes and the female partners' social classes on men's social capital in all families, male-class-predominant families, class-homogenous families and	

female-class-predominant families (measured through the current-job version of the NS-SEC), 2008 ... 281

Table n.4.1 The distribution of the social classes of individuals using the most-recent-job NS-SEC, 2008, column percentages.....	310
Table n.4.2 The distribution of two genders in the social class using the most-recent-job NS-SEC, 2008, row percentages.....	311
Table n.4.3 The class distribution by sex using the most-recent-job NS-SEC, 2008, column percentages	312
Table n.4.4 The mean age of men and women in eight social classes using the most-recent-job NS-SEC, 2008.....	313
Table n.4.5 The family class matrix of married and cohabiting couples using the most-recent-job NS-SEC, 2008, cell percentages (Weighted N=3187.9)	316
Table n.4.6 The distribution of different types of family class composition using the most-recent-job NS-SEC, 2008, cell percentages	317
Table n.5.1 Normality tests for distributions of social capital, 2008.....	319
Table n.6.1 Normality tests for distributions of social capital in eight social class using current-job NS-SEC, 2008.....	320
Table n.6.2 Normality tests for distributions of social capital in eight social class using most-recent-job NS-SEC, 2008.....	321
Table n.6.3 Normality tests for distributions of social capital in eight social class using current-job NS-SEC by sex, 2008.....	322
Table n.6.4 Normality tests for distributions of social capital in eight social class using most-recent-job NS-SEC by sex, 2008.....	323
Table n.6.5 Spearman's correlation coefficients of the associations between social capital and the social class (using the current-job NS-SEC), 2008	326
Table n.6.6 Spearman's correlation for the association between social capital and the social class (using the most-recent-job NS-SEC), 2008	328
Table n.6.7 Wilcoxon signed-ranks tests for social capital heterogeneity in seven types of families (measured through the most recent job), 2008, column percentages	332
Table n.6.8 The Kruskal-Wallis tests and Jonckheere-Terpstra tests for differences and orders of median social capital heterogeneity in seven types of families (measured through the most recent job), 2008....	334
Table n.7.1 Spearman's correlation coefficients of the associations between the male and female partners' social capital in seven types of families (measured through the most-recent-job version of the NS-SEC), 2008.....	337
Table n.8.1 Percentage of men and women's working hours, 2008, row percentage.....	339
Table n.8.2 MANOVA for the effects of own social classes and the male partners' social classes on women's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the most-recent-job version of the NS-SEC), 2008	350
Table n.8.3 MANOVA for the effects of own social classes and the female partners' social classes on men's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the most-recent-job version of the NS-SEC), 2008	352

CHAPTER ONE

INTRODUCTION

The subject of this thesis is cross-class families. This chapter will introduce the background of the topic and point out some ‘gaps’ in the literature. Then, I will explain how this thesis fills the ‘gaps’ through a brief description of the research design and the thesis structure. In the end, I will briefly explain the original contributions of this research.

The notion of cross-class families is a by-product of the joint-classification approach and the individual approach. The measurement of family social classes through these two approaches generates two types of families, class-homogenous families and cross-class families. Researchers have quickly reached a consensus on the former one, while the latter is relatively controversial. This thesis will focus on cross-class families, and use class-homogenous families as a reference group to help the understanding of cross-class ones. Through a systematic examination on cross-class families, this research will point out the problems of the conventional and dominance approaches, and the advantages of the joint-classification and individual approaches. Moreover, social capital will be used to estimate an individual’s social position in order to assist the examination of cross-class families.

The debate of cross-class families is an intermezzo in the literature of class analysis. Class analysis has long been focusing on the 'structure of positions' and 'the social division of labour' (Goldthorpe, 1983, p.467). Since the 1960s, an increasing number of researchers started to criticise 'sexism' in the literature of sociology, and more specifically in class analysis (Watson and Barth, 1964; Lenski, 1966; Schwendinger and Schwendinger, 1971; Acker, 1973; Acker, 1980; Eichler, 1980; Oakley, 1981; Delphy, 1981; Cooper, 1982; Allen, 1982). Probably the second- and third-wave feminism facilitated the reflection on the gender differences in social research. Class analysis is one of the targets. It was criticised because the overwhelming majority of the studies were about men. Many researchers arbitrarily generalised the results to the population from the male sample. Even if women were studied occasionally, their social classes were measured through the occupation of the male head of household. Their own class-related resource was generally ignored. Therefore, opponents urged more attention on investigating the social classes of women and the gender differences in social stratification.

After that, researchers started to emphasise the importance of women's occupations and other class-related features to the socio-economic positions of women and their families (Britten and Heath, 1983; Heath and Britten, 1984; Stanworth, 1984; Abbott, 1987; Abbott and Sapsford, 1987; Payne and Abbott, 1990). Some argued that the head of household could be male, as well as female. In families with female heads, the occupations of women, rather than men, should be used to determine the social classes of the families (Erikson, 1984). It is

known as the dominance approach. Some claimed that the social classes of women in all kinds of families should be determined by their own occupations (Stanworth, 1984). It is known as the individual approach. Others asserted that the social classes of families should be determined by the occupations of both the male and female partners (Britten and Heath, 1983). It is regarded as the joint-classification approach.

Gradually, the researchers of the conventional approach and the three new approaches mentioned above formed two camps: one camp contains the conventional and dominance approaches, and another contains the individual and joint-classification approaches. The major divergence between the two is whether the social classes of the family members could be different or always homogenous. The defence for the conventional approach triggered the debate on the existence of cross-class families.

In the twenty-first century, before this matter is thoroughly investigated, the attentions of the public and intellectuals shifted to other newly emerged topics, like social capital. In practice, the four approaches are all in use. The conventional and dominance approaches are still the most popular ways of measuring social class. The Cambridge Social Interaction and Stratification (CAMSIS) scale adopted an idea which is very similar to the joint-classification approach. It considers the occupation of the partner in the measurement of an individual's social class. However, the theoretical principles of CAMSIS and the joint-classification approach are different. The puzzle of cross-class families remains

unsolved.

Relevant studies rarely provided details about how to conceptualise and measure cross-class families. Without a thorough investigation on cross-class families, it is difficult to conclude whether families are all class homogenous, and whether the occupations of women or the lower-occupation partners can be ignored when measuring their social classes. Although these two issues have been examined and discussed by many researchers of class analysis in the last half-century, they have not reached a consensus. The measurement of social class became a weak link in the chain of class analysis. It leads to a newly emerged problem that most of the empirical studies mentioned in the debate of cross-class families became out-of-date. It is increasingly difficult to establish a solid theoretical foundation for the examination of cross-class families.

This thesis will try to fill in this 'literature gap'. More specifically, not only the existence of cross-class families will be investigated, but also the impact of the female and the lower-occupation partner's occupation on the measurement of their social classes will be examined. In addition, the notion of social capital will be used to assist these investigations.

There will be three main research questions. The first is whether all families in contemporary Britain are class homogenous. The second is whether the families are class homogeneous where the partners have significant social influences on each other. The third is whether the

occupations of women and the low-occupation partners have no significant impact on the social positions of them and their partners.

Through these research questions, this thesis will establish a theoretical and methodological framework of analysing cross-class families. The existence of cross-class families, and the importance of the female and lower-occupation partner's occupation, will be proved by an up-to-date and nation-wide representative data. The problems of the conventional and dominance approaches will be pointed out. Moreover, this research suggests that to obtain a more accurate measurement of an individual's social-economic position, it would be better to consider the occupations of both partners, as well as their social capital.

This thesis contains nine chapters. Having discussed the debate of cross-class families in more details in **Chapter 2**, the background of this thesis, and the literature 'gaps' it intended to fill in, will be clarified. In **Chapter 3**, I will review the methods of analysing cross-class families in previous studies. The research design of this thesis will be explained, and the dataset used in empirical examinations will be introduced. It also sheds light on the ethical concerns. In **Chapters 4 and 5**, cross-class families and social capital will be conceptualised and measured respectively to prepare for the in-depth analyses for three main research questions. Preliminary analyses will be conducted to demonstrate some basic characteristics of cross-class families and the social capital levels of the couples in contemporary Britain. In **Chapter 6**, the first research question will be examined. Families where partners differ

significantly in terms of both occupation and social capital will be identified. With two significant class-related differences, these families are unlikely to be class homogenous. In **Chapter 7**, the second research question will be studied. The result questions a widely adopted assumption of the conventional and dominance approach that ‘sharing’ between family members leads to class homogeneity. In **Chapter 8**, the third research question will be investigated. It will demonstrate that, in general, the occupations of women and the lower-occupation partners not only contribute significantly to the measurement of their own social positions, but also to their partners’. It further suggests that the individual and joint-classification approaches are more accurate compared to the conventional and dominance approaches. In **Chapter 9**, I will summarise findings for the three research questions and the original contributions this thesis made. The limitations of the analyses will be discussed for the future improvement.

In brief, the concept of cross-class families will be established and deconstructed. Through a new perspective, social capital, this thesis will provide more empirical evidences on the existence of cross-class families, and the importance of the female and lower-occupation partner’s occupations in the measurement of social class. The validity and reliability of the conventional and dominance approaches will be interrogated. A new solution of measuring social-economic positions will be suggested, which takes both partners’ social classes and levels of social capital in to account. This research will contribute to the understanding of cross-class families at both the theoretical and empirical levels.

CHAPTER TWO

THE DEBATE OF CROSS-CLASS FAMILIES IN CLASS ANALYSIS

2.1 Introduction

This chapter will review the key arguments in the debate of cross-class families, including the background of the debate, critiques and defences. Several approaches of social class measurement will be introduced, including the conventional, dominance, individual and joint-classification approaches. The fourth approach generated the idea of ‘cross-class families’. After the literature review, I will identify four ‘gaps’ in the literature through investigating some problems and limitations of the debate. On the basis of that, three key research questions of this thesis will be introduced and explained.

2.2 The debate of cross-class families

2.2.1 The conventional approach of social class measurement

The debate of cross-class families started with the critiques about the conventional approach of measuring the social class. This approach is based on two fundamental assumptions. The first assumption is that the family rather than the individual is the basic unit of the social

class, and family members are in the same social class positions (Parsons, 1954). The former and the latter statements have always been intertwined, although literally they are about two different things. A most popular argument supporting this assumption is that ‘family ... tends to be a solidary unit based on marriage’. This assumption has to be true ‘(i)n order to maintain its solidarity and effectively perform its several different social functions’ (Barber, 1957, p.73-74; cf. Williams, 1951; Parsons, 1953). Another functionalist view was that ‘because one of the family’s main functions is the ascription of status. It could not very well perform this function if it did not, as a family, occupy a single position in the scale’ (Davis, 1949, p.364).

Other proponents added that family members share a lot of things (e.g. house, income, values, furnishing and character), so that they share many class-related characteristics. Consequently, they have the same life chance and in the same social position (Parsons, 1953, p.116-117; Kahl, 1957, p.15). Kahl claimed that ‘(i)f a large group of families are approximately equal to each other and clearly differentiated from other families, we may call them a social class’ (1957, p.15).

The second assumption of the conventional approach is that a family’s social class is determined by the male head of the household. In other words, the social classes of women are determined by the male head of the household they attached to. If women are not attached to any men, their social classes are determined by their own occupations

(Wesolowski and Slomczyński, 1968; Machonin, 1970; Goldthorpe, 1983).

In addition, many conventional class theorists believed that gender inequality was not in the scope of class analysis. Acker found that there were few studies on the social classes of women or gender inequality in the social structure (1973, p.936). A typical argument made by the conventional view theorists is that 'inequalities associated with sex differences are not usefully thought of as components of stratification' (Parkin, 1971, p.14). Garnsey summarised the two positions taken by the conventional class theorists:

‘(1) Stratification theory is concerned neither with the causes nor with the effects of inequalities between the sexes;

(2) The analysis of some of the effects of these inequalities is relevant, but stratification theory is not concerned with their causes.’ (1978, p.223)

2.2.2 The critiques about the conventional approach

Since the 1960s, more and more opponents have criticised these two assumptions. The first assumption was accused of lacking empirical evidence. Watson and Barth argued that the supporting arguments by the functionalists were ‘a logical extension of the postulates of functional theory rather than a conclusion from field research’ (1964, p.13).

Acker questioned the first assumption because she claimed that not every one in the society lives in a family. If the family rather than the individual was the basic unit of the social class,

it would be problematic when measuring the social class of individuals who did not live with their families (Acker, 1973). Researchers also questioned whether family members are always in the same social class. Haavio-Mannila found that the prestige of the housewives, whose husbands were in certain occupations, was lower than women who were in the same occupations (1969). It suggests that housewives probably have a different level of prestige compared with their husbands. Moreover, Delphy argued that housewives should not be regarded as in the same social class as their husbands. Their relationship is similar to the relations of production. In the 'domestic mode of production', the housewife is in the subordinate position who does most of the housework, while the male head of the household is in the dominance position who exploit the labour of the housewife. Therefore, the husband and wife should not be regarded as in the same social class (1984, p.38-39).

Theorists of the conventional approach also assumed that family members share a lot of things which related to their life-style or social status. Thus it is undoubted that family members are in the same social class. Shils examined one thing shared by family members: what is 'deference entitlement'. He found when a family member received 'deference entitlement', the other family members may be affected by it and gain some privilege. However, the direct and indirect recipients of the 'deference entitlement' are unlikely to have equivalent entitlements. Often the direct recipients are more privileged than the indirect recipients (Shils, 1968). Therefore, even if family members share a lot of status related things, their social classes are not necessarily alike.

The second assumption of the conventional approach is also controversial. The accusation is that this assumption is made 'because of their efficiency and their consistency with other major postulates'. In other words, the second assumption was made because it is 'convenient' to measure the social class of family members through the occupation of the male head of the household (Watson and Barth, 1964, p.12; cf. Barber, 1957, p.171). It is similar to one of the weaknesses of the first assumption that there was little empirical evidence. Acker pointed out that various indicators of social class (e.g. family income and occupation) had been used by different empirical researchers when examining this matter. Thus she questioned the validity of the conclusion made by these researchers (1973, p.938).

Moreover, this assumption implies that every family, at least every conjugal family, contains a 'male head of household'. This man works full-time and his occupation contributes more than the wife's occupation to the social class of each family member. Watson and Barth found that a substantial number of families were not conjugal families or did not have a 'male head of household'. For example, husbands in some families were not in the labour force (e.g. unemployed and retired) or had a part-time job. Some conjugal families were even female-headed. The conventional approach is problematic when dealing with these families (Watson and Barth, 1964).

Watson and Barth also found that 42 per cent of the conjugal couples both working in non-farm occupations were female-occupation-predominant families. Namely, in these

families, the wife has a higher level of occupation than the husband. They proposed that the occupations of these female partners should not be ignored. They had an early intention to underline the issue of cross-class families. They pointed out that it was problematic to treat the contributions of men and women's occupations differently in relation to social stratification (Watson and Barth, 1964). Indeed, Britten and Heath found the occupations of women were associated with the variation of family income, family size, their own qualifications and husbands' voting behaviour (1983).

Watson and Barth further argued that individuals have different 'social roles'. Occupation is only one of them. Even if an individual is not in the labour force, their non-occupational activities should be considered when measuring their social class. They claimed that:

'It seems even more likely that there may be situations for a wife (and particularly for a working wife) in which her positional or personal characteristics, by virtue of their more direct visibility and more immediate relevance, are more important as determiners of status than the occupation or other characteristics of her spouse' (Watson and Barth, 1964, p.16)

Acker had similar concern with ignoring women's status resources, such as education, occupation and income. She pointed out that it is inconsistent to the assumption about the women who are not attached to a man. It is problematic that the contributions of women's occupations and other status resource were overlooked due to the change of their marital status (Acker, 1973; cf. Watson and Barth, 1964). In short, the opponents did not accept the two key assumptions of the conventional approach.

Acker also criticised the exclusion of gender inequality in the class analysis. She argued that no evidence shows that women's disadvantages in the social structure had an insignificant impact on social stratification. Class analysts could not arbitrarily allocate women into social classes without a comprehensive understanding of women's occupations and the difference between men and women in social stratification (Acker, 1973; cf. Garnsey, 1978).

Garnsey pointed out that there are two implications of excluding 'sex differences' from class analysis. One is that 'these inequalities are not among those which need to be explained by stratification theory'. The second is that 'the different social and economic circumstances of men and women should not be treated as explanatory factors in the analysis of social stratification'. She questioned that without examining the sex difference in the occupational distribution, how did they analyse 'the changing occupational structure' (Garnsey, 1978, p.224).

She argued that the rewards are available to both men and women. However, the economic rewards obtained by most women had a different order compared to men. It is problematic to separate women from men when ranking their occupational conditions.

Garnsey further claimed that this exclusion could not be compromised by allocating all women in a single social class. Instead, she suggested that 'the analysis of class stratification calls for an examination both of the socio-economic causes of inequalities based on the

division of labour between the sexes and of their effects on the class system' (1978, p.223).

She believed that 'evading the issue inevitably gives rise to inconsistencies and gaps in the treatment of important issues' (1978, p.224).

2.2.3 The appearance of 'cross-class families' and other alternative approaches for the measurement of social class

Besides criticising the conventional approach, some opponents started to explore new means of measuring social class. The one directly related to this thesis is the joint-classification approach. In 1983, Britten and Heath carried out a study to explore this approach. They measured the social class of a family through the combination of the husband and wife's occupational classes. Then a class structure was generated to classify different combinations. Although this approach mainly measures social class at family level, they implied that different social classes could be assigned to the husband and wife according to their own occupations.

Britten and Heath found that 20% of the families were 'cross-class families' in which 'one spouse is in manual work and the other is in non-manual work, most commonly a skilled manual man married to a non-manual women'. These families were regarded as 'cross-class' because 'their members fall on different sides of the conventional manual/non-manual divide'. It is notable that the majority of cross-class families consist of a skilled manual

husband and a routine non-manual wife, such as 'clerks, secretaries and shop assistants' (Britten and Heath, 1983, p.55-56).

This is the first time that the notion of 'cross-class families' appeared in the literature of contemporary class analysis. Britten and Heath further urged attention on 'cross-class families' which 'is a large and important category within the contemporary class structure which class theorists ignore at their peril'. They claimed that these families have distinct characteristics compared with class-homogenous families (Britten and Heath, 1983, p.60). It is notable that Britten and Heath did not modify conventional social class schemes. The only change they made was incorporating the unemployed, sick and houseworkers as independent categories into the chosen conventional social class schemes.

Another group of researchers noticed the distinct feature of women's employment. They explored the gender difference in social stratification. For example, Murgatroyd found that the employment of men and women are quite different. She argued that '(t)he different relationships borne by women and men to the labour market, and the high degree of sex-segregation in the labour force, require that gender be assigned a central place in any such analysis' (Murgatroyd, 1982, p.597). If stratification theory does not consider the gender factor, conclusions generated from the male population are likely to be invalid.

Acker raised a similar concern. She suggested incorporating the gender factor into social

stratification. She argued that ‘sex ... is probably one of the most obvious criteria of social differentiation and one of the most obvious bases of economic, political, and social inequalities’ (Acker, 1973, p.936). To incorporate the gender factor, she proposed that women can constitute ‘caste-like groupings within social classes’. Women in these groups have similar ‘interests and life-patterns’ and ‘share certain disabilities and inequalities’. These female castes ‘are imbedded in the class structure and each is affected by the class which envelops it’ (Acker, 1973, p.941).

In addition, she also suggested assigning a class position to the housewife. She argued that unpaid activities ‘may become more important as a source of social identity’ than paid occupations. Thus the class position of the housewife could be determined by unpaid activities, such as consumption, ‘conferred status, and pre-marriage deference entitlements belonging to the women herself’ (Acker, 1973, p.941-942; cf. Watson and Barth, 1964).

2.2.4 Goldthorpe defended for the conventional approach for the first time

In 1983, Goldthorpe, an influential proponent of the conventional approach, defended this approach for the first time. He replied to the critiques about the two key assumptions, and denied the existence of ‘cross-class families’ in the British society. He also pointed out that seeking an accurate measurement of broader socio-economic position is beyond the scope of

the class analysis.

For the first assumption, Goldthorpe claimed that class theorists believed that the family is the basic unit of social stratification because this assumption has 'fairly evident self-sustaining properties' (1983, p.468). He gave two reasons to support this argument. (1) Functionalist claimed that if family members are in different social classes, it would cause family conflict, and it is difficult to estimate the family status. (2) The husband and wife share rewards, class fate and many other things. This claim is supported by Parkin's study that 'for the great majority of women the allocation of social and economic rewards is determined primarily by the position of their families – and, in particular, that of the male head' (Parkin, 1971, p.14-15). Therefore, they must have a lot in common in terms of social class.

For the second assumption, Goldthorpe argued that men and women were treated differently when measuring their social class because this reflects reality. He said that 'this separation ... (is) the expression of a major form of inequality existing between the sexes'. It was a popular social norm that women were responsible for house making and child rearing. Consequently, women's career was largely affected by these, and they had to financially depend on their husband (Goldthorpe, 1983, p.468). Even if women had a paid job, they 'are largely peripheral to the class system' (Giddens, 1973, p.288).

Moreover, Goldthorpe cited two arguments and an empirical study to prove that the positions of husbands' had a greater impact on women's 'allocation of social and economic rewards', the 'essential circumstances of life' and 'mortality rates' than women's own occupations (Parkin, 1971, p.14-15; Westergaard and Resler, 1975, p.291; Fox and Goldblatt, 1982, p.31-33). Therefore, class theorists had to use the occupation of the male head of the household, who was most committed to the labour market, to determine the occupation of other family members including the wife.

Based on the above argument, Goldthorpe refused to admit that there were any cross-class family in the British society. He added that the individual social position of women could not be measured through conventional social class schemes. For example, junior-level routine non-manual female workers are in a similar social position as their husbands in manual occupations. This type of family should not be regarded as a cross-class family. Instead, it is still class homogenous. He further claimed that the comparison between the social positions of men and women should take the longitudinal perspective rather than the cross-sectional one. According to his dataset, most families are class homogenous.

Goldthorpe emphasised that seeking an accurate measure of social class is not the responsibility of the researchers of class analysis. He asserted that '(i)t is ... in no way the aim of class analysis to account either for a structure of class positions or for the degree of class formation that exists within it in functional terms' (1983, p.467). He argued that class

structure is relatively stable. Meanwhile, class structure is ‘an inevitable source of social conflict, in interaction with processes of class formation and mobilization ... has served historically as a major vehicle of change’ (Goldthorpe, 1983, p.467). Therefore, the critiques about the inaccuracy of the conventional approach are inappropriate.

He also refused to admit the ‘intellectual sexism’ of the conventional wisdom. He argued that there were some studies about the social class of women by the conventional wisdom. Therefore, women are not completely ignored in the literature of class analysis. According to the evidence he gave for the second assumption, researchers did not intend to ignore the status resources of women when measuring their social classes. They are ignored because they are not empirically important.

2.2.5 Replies to the defence

Heath and Britten replied to Goldthorpe’s questions about cross-class families. They proved that the occupations of women had an impact on the social positions of them and their family. Again, they pointed out the proportion of cross-class families in the British society even if families consisting of a junior routine non-manual female worker and a male manual worker are excluded (Heath and Britten, 1984).

Some believed that the social positions of individuals should be determined by their own

status resources no matter if they are male or female. This is known as the individual approach. At the same time, Stanworth defended the individual approach. She pointed out the cross-class families shown in Goldthorpe's analysis. She asked for an explanation for ignoring these families, and endorsed the necessity of considering the status resources of individuals (both men and women) when measuring their social classes (1984).

In addition, a new approach was proposed by Erikson using a Swedish dataset. He adopted almost all three assumptions of the conventional approach. The only difference is the way of measuring the social classes of some families. He pointed out that some families have a female head rather than male head of household. In these families, the social classes of the family members should be determined by the female head of household. This is known as the dominance approach.

2.2.6 Goldthorpe defends the conventional approach for the second time

Goldthorpe was not satisfied with the reply by Heath and Britten, and Stanworth's critiques. He still refused to recognise the existence of cross-class families. He argued that the impact of women's occupations on their social positions did not measure women's occupations should be regarded as an indicator when measuring women's social class. He asked for more evidence on proving the existence of cross-class families.

However, he accepted Erikson's dominance approach. The difference between the conventional and dominance approaches is relatively small comparing the difference between the conventional approach and other approaches. By 1984, Goldthorpe gradually gave up the conventional approach, and turned to support the dominance approach. Ironically, Goldthorpe admitted that there are some female headed families in the British society. Moreover, women in these families are treated completely different from the male headed families, even if they are still regarded as having unstable careers. In these families, the social resources of men rather than women are ignored.

After that, Goldthorpe and Erikson worked together to show that the weakness of the individual approach. They used women's own occupations to measure their social class, but the result of the intergenerational social mobility rate, especially the relative mobility rate, was not empirically different from the one generated from the conventional and dominance approaches. They believed that the difference of the three approaches on the abstract mobility rate suggests the problem of the individual approach rather than the problem of the other two. The reason is that they believe the abstract mobility rate should not be as great as the individual approach showed. The result of the conventional and dominance approaches is more sensible.

2.2.7 The fading of the debate

After the controversy in 1980s, the discussion on cross-class families was fading away. In 1992, Heath gave up the joint-classification approach by joining in Goldthorpe's research team to generate a new version of class scheme based on the dominance approach. Although there are some studies on the social classification of women in the 1990s and 21st century, the term of cross-class families is rarely mentioned. Some studies were on cross-class families, but rarely shed light on improving the theoretical framework and measurement of the cross-class families. The notion of cross-class families is still underdeveloped since different researchers had different definitions. In the field of class analysis, the conventional and dominance approaches are still in the dominated position.

The reasons why the attention to cross-class families has been fading may be as follows. Firstly, when measuring the social class at the family level, the joint-classification approach may require multivariate analyses since the occupations of two partners should be considered simultaneously. The pioneer of the dominance approach, Erikson argued that

‘... it is profitable to take the occupations of both husband and wife into account. ... If one wants to consider the full range of variation in husbands’ and wives’ occupations, it seems better to keep them as separate entities and deal with them simultaneously via multivariate techniques’ (1984, p.512).

It is more difficult than applying the conventional and the dominance approaches, which only take the occupation of one partner into account. The univariate analysis is less

complicated than the multivariate analysis. This technical complication may restrain the application of the joint-classification approach. Consequently, the by-product of this approach, cross-class families, is less likely to be seen in the literature of class analysis after the original proposal.

Secondly, much attention has been drawn to a new approach, the CAMSIS. The exploration of this class scheme started in 1970s. Originally, it measures the social classes of individuals through the social interaction with friends (Stewart et al., 1973; Stewart et al., 1980). Recently, this approach started to consider the occupations of the married and cohabiting partners rather than friends as one of the indicators of the social classes of individuals (Prandy and Lambert, 2003). This approach is relatively well developed and has been widely accepted as an alternative of the conventional and dominance approach.

However, it is different from the joint-classification approach. CAMSIS uses the occupations of partners as one of the determinants because the proponents believed that ‘... persons sharing a similar social position ... are more likely to interact socially on the basis of equality with members of the same group than with members of other groups’ (Lambert, 2008). In contrast, the joint-classification approach believed that at the individual level, the social position of two partners can be different. Therefore, the development of the CAMSIS is not sufficient to answer the questions left by the debate of cross-class families.

More detailed literature review can be found in Chapters 4 to 8. For example, the literature review about the conceptualisation and methodology of cross-class families is in Chapter 4. That about the definition and methodology of social capital is in Chapter 5. In Chapters 6, 7 and 8, each chapter deals with one or more issues. The corresponding literature review can be found at the beginning of these chapters.

2.3 Literature ‘gaps’

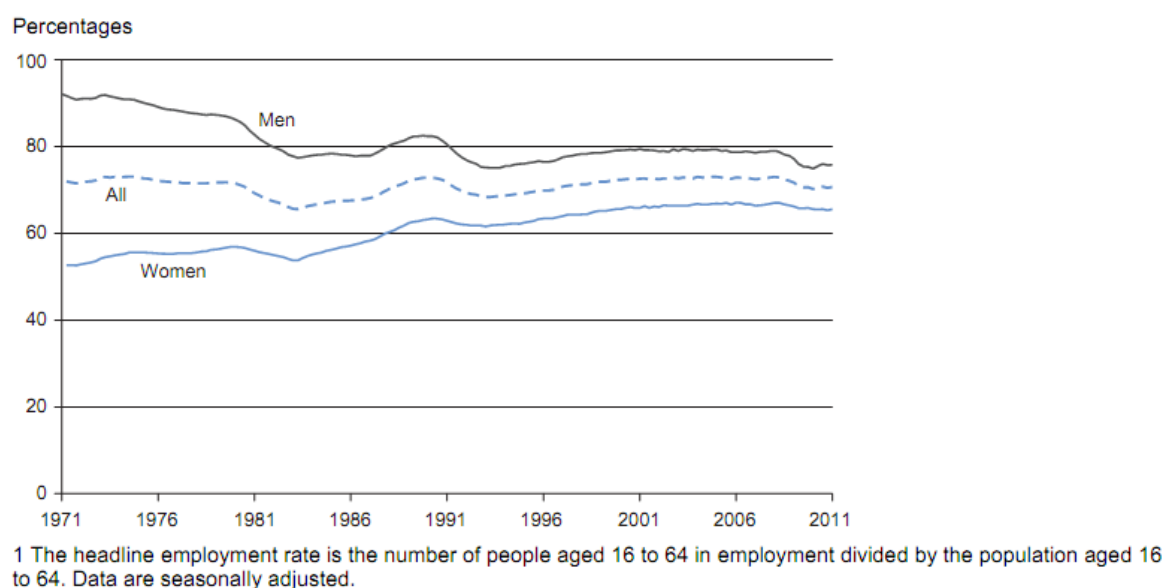
This section will explain what the ‘gaps’ in the literature of cross-class families are, and what this thesis could contribute to the debate of cross-class families. First of all, society has changed since the beginning of the debate. Secondly, there is no consensus about the definition and measurement of cross-class families. Thirdly, the social capital perspective has never been used to assist in understanding cross-class families. Fourthly, the debate of cross-class families has not reached a conclusion yet.

2.3.1 Social changes

Most studies related to the debate of cross-class families are based on datasets collected in the 1970s or earlier. Over last four decades, British society has changed in many ways. The employment rate of women increased from about 50 per cent in 1971 to about 65 per cent in 2011. In contrast, the employment rate of men decreased from about 90 per cent in 1971 to about 75 per cent (Figure 2.1). Moreover, the economic inactivity rate of women was 45 per

cent in 1971. In 2011, it reduced to below 30 per cent. The economic inactivity rate of men increased from about 5 per cent in 1971 to about 17 per cent in 2011 (Figure 2.2).

Figure 2.1 Employment rates by sex in the UK from 1971 to 2011



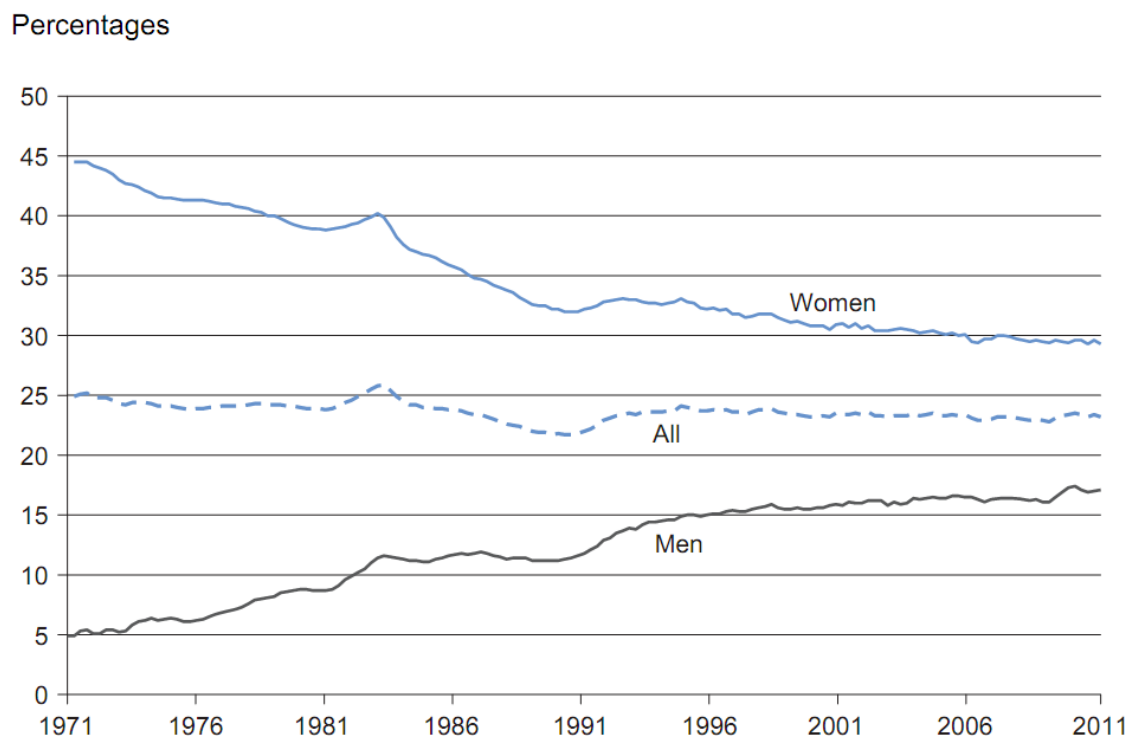
Source: Labour Force Survey (cited in ONS, 2011b, p.6, Figure 2)

Nowadays, women are less likely to be economically inactive owing to looking after their family or home than in 1971. The proportion reduced from 48.1 per cent in 1971 to 35.4 per cent in 2011. On the contrary, men were slightly more likely to be economically inactive for this reason. The proportion changed from 4.7 per cent in 1971 to 5.7 in 2011 (ONS, 2011b, p.19, Table 5).

In 1996 to 1997, about six in ten married or cohabiting couples (with the male partner aged 16 to 64 and the female partner aged 16 to 59) with dependent children were two-earner

couples. Seventeen years ago, only half were two-earner couples. The one-earner couples reduced from about 45 per cent to about 30 per cent (ONS, 2000, p.68). It suggests that probably more women make financial contributions to the family now.

Figure 2.2 Economic inactivity rates by sex in the UK from 1971 to 2011



1 People aged 16 to 64. Data are seasonally adjusted.

Source: Labour Force Survey (cited in ONS, 2011b, p.18, Figure 9)

Hakim found that, in 1999, about 33 per cent of cohabiting women and 27 per cent of married women regarded themselves as the primary earner of the family (2003, p.82, Table 3.13). This is over one in five married and cohabiting women. The proportion may be overestimated because 91 per cent of married and cohabiting men regarded themselves as the primary earners. However, it may also reflect that a considerable proportion of women made

great financial contributions to their families.

Hakim summarised the possible reasons for women's changing employment patterns. First, the contraceptive revolution gave female individuals the power of the fertility control. Second, the equal opportunities revolution let women legally have the same chance as men in the labour market. Third, the increasing number of white-collar occupations and flexible jobs allows women to balance their career and family caring responsibilities. Fourth, new social values (e.g. egalitarian) emerged which allows women to have different lifestyles (2003, p.7).

These changes started from the mid-1960s. It is not surprising that there are an increasing number of women in the labour force over the last four decades, and a large proportion of female as main breadwinners in contemporary families. It is a good time to revisit the debate of cross-class families and re-examine some unfinished discussions after above substantial social changes. This thesis will fill this gap with a re-examination of cross-class families using up-to-date datasets.

2.3.2 No consensus on the definition and measurement of cross-class families

In the literature on cross-class families, various definitions and measurements have been

used. Some restrict cross-class families to families where the female partner is in a higher-level routine non-manual occupation and the male partner is in a manual occupation (McRae, 1986). Some considered more boundaries between different social classes could be used to define cross-class families (Graetz, 1991). Others define it as all families who are in different categories of a social class scheme (Britten and Heath, 1983; Wright, 1997). It is notable that the proportion of cross-class families highly depends on the definition of cross-class families researchers choose.

The same problem can be found in the measurement of cross-class families. Different researchers prefer different social class schemes. For example, sometimes housewives and the unemployed are included in the measurement (Britten and Heath, 1983). Sometimes they are excluded (Wright, 1997). Even if the same dataset is examined, variation in measurement can generate completely different cross-class families. Therefore, it is essential to conceptualise and measure cross-class families clearly. This thesis will fill this gap by establishing a solid theoretical and methodological foundation for this. For example, it will use an up-to-date social class scheme, NS-SEC, which was generated from occupations in the contemporary British society.

2.3.3 Never tried the social capital perspective

When the attention to the debate on cross-class families was fading away, more and more

attention was drawn by a newly emerged concept, 'social capital'. So far no study on cross-class families has tried the social capital perspective. However, researchers of class analysis already proposed similar ideas in the 1960s. When Watson and Barth discussed ways of measuring women's social class, they argued that the civic participation of economically inactive women should be considered as an indicator of women's social class.

'Many women who are not in the labor force are engaged in socially significant activities other than those associated with the housewife role. They participate in a great variety of social clubs and voluntary associations and in volunteer work. Many of these activities have high community visibility. Some require forty hours or more per week. The rewards for such participation, although measured in prestige or other units rather than in dollars, are nonetheless quite real' (Watson and Barth, 1964, p.15)

The social contacts of employed women may also help to identify their social positions. They argued that 'work contacts provide one basis for other patterns of social participation; these extra-work contacts are themselves evaluated and are an additional source of prestige judgements within the community' (Watson and Barth, 1964, p.15). Even Parsons admitted that 'the unit of class stratification can no longer be usefully taken to be the family but a man's complex of ascribed and achieved collectivity memberships, including his organization memberships' (Laumann, 1970).

However, the rudiments of the idea can be traced back to the conventional and dominance approach. The proponents of the conventional approach emphasised within-couple mutual influence. They believed that by sharing dwelling and other living conditions, family

members share the same social class position (Goldthorpe, 1983; Erikson, 1984). Wright also considered the within-couple mutual influence, and tried to incorporate it into the measurement of women's social classes. He said that

‘The material interests of real, flesh and blood individuals are shaped not simply by such direct personal relations to productive resources, but by a variety of other relations which link them to the system of production. In contemporary capitalist societies these include, above all, relations to other family members ... and relations to the state. I will refer to these kinds of indirect links between individuals and productive resources as ‘mediated’ relations’ (Wright, 1997, p.258).

The idea is that the social class is, to some extent, determined by the family relationship.

Family relationships are one type of social capital.

Savage and his colleagues suggested a new way of measuring social class. They argued that economic capital, human capital and social capital are different types of capital individuals own. The measurement of social class should consider various ‘capitals, assets and resources’ individuals have rather than merely the economic capital and human capital (Savage et al., 2005).

This thesis will follow this proposal and use social capital to assist in our understanding cross-class families. It could be used as an estimation of the social positions of individuals. For example, in the debate on cross-class families, the conventional and dominance approaches refused to admit that some families are class heterogeneous. By identifying families heterogeneous in terms of occupational level as well as social position (i.e. social

capital) this thesis would be able to challenge the idea that all families are class homogenous. More detailed discussion about how social capital will assist in the examination of cross-class families will be discussed in Section 2.4. The conceptualisation and measurement of social capital will be introduced in Chapter 5.

2.3.4 Unfinished debate

Finally, since the debate of cross-class families has not reached a conclusion, it would be interesting to continue the discussion. Although the conventional and dominance approaches are relatively more widely accepted and used in social research, it does not mean the joint-classification and individual approaches are theoretically wrong or less practical. I believe that one reason may be that studies on joint-classification and individual approaches, especially of cross-class families, are underdeveloped. Systematic examination of cross-class families based on a sound theoretical foundation using large-scale dataset as the adherents of the conventional and dominance approaches did is rare. Therefore, this thesis would be an important step forward.

2.4 Social class, social capital and social position

Marx divided people into two main opposing classes, the capitalists and the proletarians (with a temporary and unstable intermediate class) through the ownership of production materials and labour (Edgell, 1993, p.3 and 9). Weber, for his part, defined ‘social class’ as

groups of people who share '(t)he typical chance for a supply of goods, external living conditions, and personal life experiences' (Weber, 1961, p.181). Similar to Marx, he believed that 'social class' was 'essentially an economic phenomenon' and that property in the means of production was one of key determinants along with possession of marketable skills (Edgell, 1993, p.13). Following the definitions of these two founding fathers, but especially Weber, the economic aspect (associated with the idea of occupations) became the focus in the conceptualisation and measurement of 'class' (Crompton, 2008, p.49).

In the literature of cross-class families, 'class' was often measured through occupational class schemes (see Section 4.2.1). For example, in their pioneering work on cross-class families, Britten and Heath adopted the Registrar General's social classification and the market research classification. Both were occupation-based. To be consistent with the previous studies, this research will also adopt an occupational class scheme to examine whether there are any cross-class families (i.e. cross-occupational-class families) in contemporary Britain (see Chapter 4).

Since the earlier studies, however, the primary focus on economic capital has been modified. Researchers have become aware of the effects of other types of capitals on the measurement of social class, such as social capital, cultural capital, human capital and symbolic capital (Savage, et al., 2005, p.32). Grusky and Ku, for example, have claimed that inequality in contemporary society is multidimensional. For example, those higher in the stratification

order order are privileged on many dimensions compared to the those who are lower, in terms of social capital, education and health (2008, p.6 and 22). Occupation is only one of dimensions of the inequality reflecting the social classification.

The importance of social capital for position within a stratification order was first proposed by Bourdieu. He argued that social capital (i.e. 'actual or potential resources' of accessing social networks) can be accumulated and transferred to the next generation (Bourdieu, 1983, p.248). The upper classes store their social capital and pass it on to their children. Through this way, privileged status is secured. Lin further argued that 'inequalities in social capital explain the framework for inequalities in social stratification' (2001, p.96). The privileged groups have more closed social circles to secure the monopoly of resources. Burt found that people in the lower socio-economic groups were more likely to move upward if they had access to the social networks of higher social groups (2001).

Given the strong effects of social capital on social position, this research will incorporate social capital into the measurement of class. In contrast to the emphasis on occupational classes reflecting the 'economic positions' of individuals, social capital will also be used to gauge their 'social position'. In Chapter 6, families heterogeneous in terms of both occupations (i.e. economic positions) and social capital levels (i.e. social positions) will be identified. The existence of such families will be a convincing counter-evidence of the conventional assumption that all families are class homogenous. In Chapters 7 and 8, an individual's social capital will also be used to estimate the social position. Therefore, in this

this thesis the notions of ‘social position’ and ‘social capital’ are interchangeable.

It is notable that social capital is not the only type of capital affecting stratification order. Cultural capital also has an important impact. Bourdieu argued that cultural capital ‘is convertible, on certain conditions, into economic capital and may be institutionalized in the forms of educational qualifications’ (1983, p.241-258). Miller and Hayes found that women’s educational attainment had independent effects on their offspring’s occupations (1990, p.53-63). Due to the limitation of space, however, this thesis will not explore the way of incorporating cultural capital into the measurement of social class. It would be worth doing so in the future research.

2.5 Research questions

In order to fill the literature ‘gaps’ mentioned above, this thesis will continue the discussion of cross-class families in contemporary British society through a social capital perspective. It will focus on examining the two controversies of cross-class families, which could be divided into three research questions: (1) Are two partners always in the same social class? (2) Do within-couple social influences mean that partners are in the same social class? (3) Do the occupations of the female and lower-occupation partners have any impact on the social positions of their own and their partners’?

These research questions will be examined through several procedures. For the first research question, this thesis will identify families in which the husband and wife are in different occupational levels. Then, I will compare the social capital of the two partners in these families. If couples are in different occupational levels and have different levels of social capital, they are very likely to be class heterogeneous rather than homogenous. If couples are different in terms of occupations but similar in terms of social capital, or the opposite, it suggests that there might be some social heterogeneity which is not captured by the chosen social class scheme. This research question will be examined in Chapter 6.

For the second research question, I will first find out if cross-class couples influence each other in terms of social capital. I will also find out if couples influence each other significantly in terms of social capital, whether they have the same level of social capital. If they do influence one another significantly, but are in different occupational classes, and have significantly different levels of social capital, it would raise a question about the assumptions of the conventional and dominance approaches that sharing exclusively results in class homogeneity. This research question is tackled in Chapter 7.

The third research question is quite straightforward. This thesis will investigate if the occupations of women and the lower-occupation partners have a significant effect on the social capital of their own and their partners. If so, it would be problematic that the conventional and dominance approach ignore the contribution of either the occupations of

women or that of the lower-occupation partners. This research question is the focus of Chapter 8.

2.6 Summary

In this chapter, I reviewed the literature on the debate of cross-class families. The ‘gaps’ in the literature were pointed out. Filling these ‘gaps’ will be the main tasks of this thesis. After that, I clarified the research questions which will be examined one by one in the following data analysis chapters. In the next chapter, I will review the methods of examining cross-class families in the literature and introduce the methods chosen for this thesis.

CHAPTER THREE

METHODOLOGY FOR ANALYSING CROSS-CLASS FAMILIES

3.1 Introduction

In the last chapter, I reviewed debates on cross-class families, and pointed out the gaps in previous studies. Three key research questions were raised (Are two partners always in the same social class? Do within-couple social influences mean that partners are in the same social class? Do the occupations of the female and lower-occupation partners have any impact on the social positions of their own and their partners’?). This chapter will focus on reviewing the methods which have been used in the previous studies to examine similar matters. Then I will demonstrate how the thesis is designed to answer the three research questions. The datasets used in the following chapters will be introduced. Basic information and the features of the datasets will be given. In addition, I will discuss the ethical concerns related to the whole study.

3.2 Methods of analysing cross-class families

The concept of cross-class families is found not only in the field of class analysis, but also in other fields of sociology. For example, in family studies, cross-class families are known as

‘class exogamy’, ‘class intermarriage’ and ‘class heterogamy’. When these notions are mentioned, the studies mainly focus on assortative mating, or the effect of class heterogeneity on dissolution and other family issues (Centers, 1949; Dinitz et al., 1960; Ramsøy, 1966; Glenn et al., 1974; Jorgensen, 1977; Thornes and Jean, 1979; Jorgensen and Klein, 1979; Blau, et al., 1982; Jacobs and Furstenberg Jr., 1986; Jones and Davis, 1988; Bozon and Heran, 1989; Kalmijn, 1991; Tzeng, 1992; Kalmijn, 1994; Kalmijn, 1998; Kalmijn and Flap, 2001). In the field of class analysis, cross-class families are studied in order to show that family members may not always be class homogenous. The purpose is to demonstrate a new approach of measuring social class contrasted with the conventional approach which assigns the same class positions to all family members. This thesis is interested in the study of cross-class families in the field of class analysis, although sometimes the boundary between the two fields (of class analysis and family studies) is not clear cut. The following discussion mainly reviews methods in the field of class analysis.

Generally speaking, three approaches have been used. One is purely theoretical discussions about cross-class families. The second is qualitative studies which include interviews with cross-class couples. The third is quantitative studies which apply statistical methods to measure the proportion of cross-class families and the features of these families.

Studies of the purely theoretical discussion on cross-class families focus on reviewing debates as well as the corresponding critiques (Stanworth, 1984; Duke and Edgell, 1987;

Carling, 1991; Sørensen, 1994; Devine, 1997). This type of study provides a comprehensive theoretical background regarding cross-class families. However, an important weakness is that there is no improvement on the empirical level which is the popular target of the critiques (Goldthorpe, 1983; Goldthorpe, 1984).

The second way of examining cross-class families is through qualitative methods. A landmark is the study done by Susan McRae (1986). She contacted a selected range of employers in the public sector in a specific area in the UK to get access to married female employees in the higher-level nonmanual occupations, such as ‘teaching, nursing and social work’ (McRae, 1986, p.27). Through the questionnaires of 2,155 women, information on education and occupation, as well as the occupations of their husbands were obtained. Thirty cross-class couples were selected, based on responses to the questionnaires, and interviewed in depth.

The interviews revealed vivid stories of cross-class couples, such as their detailed occupations, career trajectory, family social background and marital history. The most important finding of all is that the interviews showed what the everyday life of ‘cross-class families’ was like, and the difference between the husband and wife in terms of social class. A limitation of this method is that the ‘cross-class families’ she selected were not nationally representative. The study did not even represent one of the frequent types of ‘cross-class families’, in particular where the wife is in a routine non-manual occupation and the husband

is in a manual occupation. This limitation arises from the method of sample selection. Although McRae claimed that the geographical area she selected 'was nothing unusual' (1986, p.27), one cannot expect a single geographical area to represent the UK. She admitted financial limitations meant that the geographical area could not be too wide. Moreover, 'no sampling frame, or accurate and complete list of the entire population of cross-class families from which one might draw a sample, exists' (McRae, 1986, p.26). One solution to this concern is to use a nationally representative survey which contains the information on the occupations of both the husband and wife, as well as other information of the families and individuals.

This research will use the third method, the quantitative research method, in particular using secondary data. It is the method used in most studies of cross-class families. These studies often use a large scale dataset to obtain the proportion of cross-class families and class-homogenous families. Sometimes class heterogeneity is the main subject of the studies (Hout, 1982; Leiulfsrud and Woodward, 1988; Baxter, 1988; Jones, 1990; Graetz, 1991). Sometimes it is the preparation for examining other characteristics of these families (Britten and Heath, 1983; Prandy, 1986; Leiulfsrud and Woodward, 1987; Wright, 1989; Rethon, 2008). On other occasions, it is one of the family characteristics summarised by the researchers (Abbott and Sapsford, 1987; Marshall et al., [1988] 1993; Wright, 1997; Wright, [2000] 2004; Brynin et al., 2009).

In Britain, studies of cross-class families using quantitative methods were mainly done in the 1980s (Britten and Heath, 1983; Prandy, 1986; Abbott and Sapsford, 1987; Leiulfsrud and Woodward, 1987; Jones, 1990). More recent studies rarely focus only on the issue of cross-class families. Instead, it is either a small part of the study or a tool for analysing other issues (Marshall et al., [1988] 1993; Rothon, 2008; Brynin et al., 2009). It is the same in other European countries and in the United States: very little research focuses on cross-class families in the 1990s or afterwards (Graetz, 1991; Wright, 1997; Wright, 2004). Most quantitative studies on this topic may be traced back to the 1980s (Hout, 1982; Leiulfsrud and Woodward, 1987; Baxter, 1988; Wright, 1989).

This thesis intends to make a contribution to the understanding of cross-class families at the empirical level. Therefore, it will use quantitative methods to examine three key research questions (Section 2.4). Since the existing literature does not have up-to-date empirical evidence of the British society to support the joint-classification approach, it is worth filling in this gap. Now a new national level dataset, the British Household Panel Survey (BHPS) is available, with data for 2008-2009 (wave 18) the most recently available. A new government class scheme, the National Statistics Socio-economic Classification (NS-SEC) has been launched. It is a good opportunity and feasible to examine cross-class families through a large scale dataset such as this. Moreover, through a completely new perspective, social capital, this thesis will facilitate the understanding of cross-class families.

3.3 Research design

More specifically, this thesis will examine cross-class families through three key research questions stated in the Section 2.4. (1) Are two partners always in the same social class? (2) Do within-couple social influences mean that partners are in the same social class? (3) Do the occupations of the female and lower-occupation partners have any impact on the social positions of their own and their partners’?

For the first research question, I will use Wilcoxon signed-ranks tests to examine if the social capital levels of the male partner and the female partner differ significantly, especially in cross-class families. If the two partners who were different in terms of occupational levels also had significantly different social capital, it suggests that these couples may be class heterogeneous. If the partners of these families did not differ significantly in terms of social capital, it is possible that the occupational class, NS-SEC, misclassified these families as cross-class families.

For the second research question, I will use the significance tests of the Spearman’s correlation coefficient to examine if the social capital levels of the male partner and the female partner were associated significantly. If families in which the two partners differ significantly in terms of occupational classes and their social capital levels, but the social capital levels still have a significant correlation, it suggests that sharing living conditions or social contacts do not necessarily mean they were in similar social positions. In other words,

it is possible that even though partners influence each other socially and strongly, they are still class heterogeneous.

For the third research question, I will use Multivariate analysis of variance (MANOVA) to examine if the occupational levels of women had significant effects on their social capital. If the effect were significant after controlling for the impact of men's occupational classes, it suggests that women's occupations may have an important contribution to their social position as well as their social class, which is independent from the contribution of their male partners' occupations. Similar examinations will be carried out to test the impact on the social capital level of the male partner. The results also answered the questions about the contributions of the lower-occupation partners' occupational class to the social capital of their own and their partners. More details about the methods used in this thesis are discussed in the corresponding sections in Chapters 4 to 8.

3.4 Data: the British Household Panel Survey (BHPS)

This thesis will use the latest and the last wave of BHPS, wave 18, which was carried out in 2008-2009¹. BHPS is a nationally representative survey funded by the Economic and Social Research Council (ESRC). It contains 18 waves in total and was carried out by the ESRC

¹ In time it will be possible to trace remaining BHPS respondents through their inclusion in the new *Understanding Society*, although the timing of fieldwork has moved to year-round, what is effectively 'wave 19' has a long gap after wave 18, and questionnaires have changed somewhat. This may limit comparability.

UK Longitudinal Studies Centre and the Institute for Social and Economic Research (ISER) at the University of Essex annually. The first wave was mainly collected in 1991, and the sample was derived from the small users Postcode Address File (PAF) for Great Britain (i.e. excluding Northern Ireland), 5,538 households containing 13,840 individuals were selected through ‘a two-stage clustered probability design and systematic sampling’ (Taylor et al., 2009, p.4-1). Originally, the respondents were all adults aged 16 and over. They are known as the original sample members (OSMs).

In the following waves, all households containing one or more OSMs are interviewed annually if possible. Consequently, newly born babies and new household members were included as temporary sample members (TSMs). If a TSM had a child with an OSM, he or she became the permanent sample member (PSM). Then, both the child and the PSM are interviewed annually. Other expansions of the sample size happened in 1997, 1999 and 2001. From 1997, a sub-sample of the original United Kingdom European Community Household Panel (UKECHP) was included; it contained 1,710 households but was dropped in 2002, wave 12, due to lack of funding. In 1999, the sub-samples in Scotland and Wales were expanded from the original about 500 households to about 1,500 households in each country. Two years later, the sub-sample in Northern Ireland was expanded to 1,979 households. Meanwhile, some respondents left the sample due to refusal and non-contact every year. By 2008 wave 18, the sample contains 14,419 respondents aged from 15 to 101 in the UK.

3.4.1 The advantages of BHPS

BHPS is used for a number of reasons. BHPS is regarded as ‘the only major panel study of its nature in Britain’ (Lambert, 2006, p.7). It contains one of the best sub-surveys about social capital in the UK. Combined with geographic and socio-economic questions, this dataset has all the information needed in this thesis. Moreover, the large sample size is ideal for multivariate statistical analyses. It is also nationally representative and covers all four countries of the UK. Although the dataset has attrition over eighteen years, the representativeness remained at an acceptable level. Thus the analyses using this dataset can be generalised to the British society.

Furthermore, BHPS interviews every member of the selected households. Every adult family member is interviewed in the same way using the same questionnaire. It means that both the male and female partners provided the same amount of information. In addition, the relationships between household members are recorded. Thus, it is convenient to trace the information of the spouse or the cohabiting partner. For this thesis, it is very important to identify married and cohabiting couples, and obtain their information in pairs. BHPS is especially useful for this purpose.

Compared with the dataset used by Goldthorpe for his critiques of cross-class families, the BHPS is more gender balanced and more appropriate for the study of cross-class families. The dataset used for Goldthorpe’s critiques is the 1974 national social mobility inquiry by

the Social Mobility Group at Nuffield College, Oxford. The respondents are all male. The sample was selected ‘in order to be representative of men with certain fairly distinctive experiences of class mobility or immobility’ (Goldthorpe, 1983, p.472). The information about women was generated from the answers of the male respondents about their wives. Therefore, the sample is gender biased and ‘do(es) not form a basis on which national population estimates concerning the employment patterns of married women may appropriately be made’ (Goldthorpe, 1983, p.472). On the contrary, the BHPS forms a sounder basis for the study of cross-class families.

3.4.2 Characteristics of the sample

Although this thesis is a cross-sectional study mainly based on BHPS wave 18, earlier waves are also useful. Questions about social capital were asked in wave 17 and some earlier waves rather than wave 18. Since the social capital of individuals is likely to change over time, the most recent answers are more reliable than the earlier ones. Therefore the information on social capital is obtained from wave 17 for the respondents in wave 18. In addition, some geographic questions, like the year in which they moved into the current property, were only asked in the first interview. After that, changes are reported if there is any. Therefore, this type of information, like the length of residence (such as shown later in Table 5.1), is summarised from the answers obtained from almost all waves. The years of all waves used to generate the information in use will be stated beneath the table or graph.

The analyses about couples for the three key research questions (in Chapters 6 to 8) use a sub-sample of the BHPS wave 18. It only contains married and cohabiting heterosexual couples², who are aged from 16 to 18 and not in full-time education, or aged above 18. There are 3,264 married couples and 716 cohabiting couples, making a total of 7,960 individuals.

Table 3.1 shows the demographic and socio-economic characteristics of this sub-sample. The numbers of men and women are the same, by virtue of selecting opposite-sex couples. About 82 per cent respondents were married, with only 18 per cent cohabiting. The average age of the sub-sample was about fifty. Female respondents were, on average, slightly younger than male respondents. The overwhelming majority was white, with only a few from ethnic minority backgrounds. About half of respondents had a degree or higher ('tertiary') qualification. Men were more likely to have a higher qualification than women, but the difference was not large (53.8 per cent and 48.8 per cent respectively). In contrast, women were more likely than men to have secondary, primary or no educational qualifications than men.

In the sub-sample, most respondents were either employed or self-employed (63.6 per cent). Men were more likely to have paid work than women. About four in ten female respondents were unemployed or economically inactive at the time of the interview. According to the job at the time of the interview, over half of respondents were working class, over 16 per cent

² In fact I select only male:female couples, without any specific test or question about their sexual orientations.

Table 3.1 BHPS sample characteristics, married and cohabiting heterosexual adult men and women, 2008

	Column percentages and means		
	Overall sample	Male sample	Female sample
<i>Age (years)</i>	49.2	50.4	48.1
<i>Ethnicity</i>			
White	97.4%	97.4%	97.3%
Non-white	2.6%	2.6%	2.7%
<i>Marital status</i>			
Married	82.0%	82.0%	82.0%
Cohabiting	18.0%	18.0%	18.0%
<i>Highest educational qualification</i>			
Tertiary	51.3%	53.8%	48.8%
Secondary	25.4%	24.5%	26.3%
Primary	7.1%	6.6%	7.5%
None	16.3%	15.1%	17.4%
<i>Employment status</i>			
Employed/Self-employed	63.6%	69.7%	57.5%
Unemployed/Economically inactive	36.4%	30.3%	42.5%
<i>Social class – current jobⁱ</i>			
Service class	26.9%	29.5%	24.4%
Intermediate class	16.3%	16.1%	16.6%
Working class	56.7%	54.5%	59.0%
<i>Social class – most recent jobⁱ</i>			
Service class	36.9%	39.3%	34.5%
Intermediate class	24.4%	22.5%	26.4%
Working class	38.7%	38.2%	39.2%
N	7,960	3,980	3,980

Note:

i The social class is coded according the NS-SEC. Details about the theoretical foundation and coding of the social class is in Chapter 4 Section 4.2.1.

Source: BHPS, 2003-2008

were intermediate class, and about a quarter were in the service class. Men were more likely than women to be in the service class, while women were more likely to be in non-service classes. When the most recent job is considered to identify social class, some respondents currently out of the labour force are assigned social classes according to their previous job.

In this case, the proportion of working class respondents is lower and the proportions of non-working classes increase. However, men were still more likely to be in the service class than women.

3.4.3 Weighting

As discussed in Section 3.3.1, the original BHPS sample was nationally representative. In 1997, 1999 and 2001, three sub-samples were added in. It also has attrition over 18 years. To get a nationally representative sample, weights should be applied to adjust the sample. Each wave of BHPS has different weights. There are also weights for different research methods, cross-sectional studies and longitudinal studies. The weight for wave 18 in a cross-sectional study is variable 'rxrwtuk1'. Moreover, the sampling design variables in a household level dataset 'rHHSAMP' should be incorporated which are variables 'wstrata' and 'wpsu' (Taylor, et al., 2009, p.A5-1-A5-30).

It is notable that only descriptive analyses in this thesis used a weighted sample in order to obtain a characteristic of the general population, because the percentages are largely affected by the weights. For example, the distribution of the social class (Table 4.3) and the distribution of the family class composition (Table 4.6). However our sample description did not apply weights, since it was not intended to generalise to the population (e.g. Tables 3.1 and 5.3). Moreover, the advanced statistical analyses (e.g. the main analyses of Chapters 6 to

8) do not need weights, because these methods are used to test the significance of certain relationships which is not affected by the weights (Winship and Radbill, 1994; Korn and Graubard, 1995). The graphs of the preliminary analyses in Chapters 6 to 8 are also unweighted in order to be consistent with the main analyses.

3.5 Ethics

This section discusses the ethical concerns of this research. The main issues concerning research ethics are those of informed consent, and ensuring that no harm comes to research participants. All research may have ethical implications.

The dataset used for this thesis is the BHPS, and primarily wave 18. It is a secondary dataset. It is important that such data is collected using the principle of ‘informed consent’ and this was ensured by the data collector, the ISER at the University of Essex. The documentation of the BHPS explains the detailed process of the data collection (Taylor, et al., 2009) and provides copies of all relevant documents. The approval for the use of the data was obtained online through the standard ‘end-user licence’ of the Economic and Social Data Service (ESDS). For such uses, the data is anonymous, indeed the data goes through an anonymisation process, and is confidential.

This research does not intend to track anybody through the BHPS (a requirement of the

end-user licence). The conclusions made will do no harm to the BHPS participants, or at least it is difficult to perceive any risk of that happening. There seems to be little risk that the research findings will create any negative influence on society or have any harmful consequences.

In terms of research conduct, I strive to provide sufficient details to ensure that the research is transparent and replicable. All methods used in the data analyses have been explained, and further details about the data analyses could be provided if required. Therefore, this research is consistent with the ethical requirements appropriate to a PhD at the University of Birmingham.

3.6 Summary

This chapter reviewed the research methods used in the existing studies of cross-class-family in the context of class analysis. The reasons why quantitative research methods were chosen was explained. This chapter introduced the features of BHPS and the reasons of choosing it. The specific sample of BHPS used for this research was described. I also explained why in the following chapters, some analyses applied weights but some did not. Finally, the ethical concerns of this thesis were discussed. The next chapter will start to conceptualise cross-class families, and discuss the methods of measuring them.

CHAPTER FOUR

CONCEPTUALISING AND MEASURING CROSS-CLASS FAMILIES

4.1 Introduction

In the last chapter, I introduced the key features of the dataset, and discussed ethical concerns. This chapter starts by defining cross-class families. Two key elements will be clarified, namely ‘cross-class’ (i.e. class boundaries) and ‘families’. Then the methods of measuring cross-class families in the literature will be reviewed. The methods for this research will be introduced. The first is how to measure the social classes of individuals; and the second is how to measure the social class of families. The model of cross-class families will be presented. After that, I will carry out some descriptive analyses on the social classes of individuals and the class compositions of families.

4.2 Conceptualising cross-class families

The notion of ‘cross-class families’ (sometimes ‘cross-class households’) has been controversial in the literature on class analysis (Britten and Heath, 1983; Heath and Britten, 1984; McRae, 1986; Marshall et al., [1988] 1993; Carling, 1991; Leiulfsrud and Woodward, 1987; Baxter, 1988; Graetz, 1991; Wright, 1997, 2004). Literally, it refers to families where

the husband and wife are in different social classes. Similar concepts in homogamy studies are 'class exogamy', 'interclass marriage', 'social class heterogamy', and 'occupational heterogeneity' (Centers, 1949; Dinitz et al., 1960; Glenn et al., 1974; Jorgensen, 1977; Jorgensen and Klein, 1979; Blau et al., 1982).

The meanings of these concepts in the two fields of class analysis and homogamy have some overlaps, but it is not difficult to spot the difference. In the class analysis studies, the definitions tend to emphasise the possibility that family members occupy different social class positions. In the homogamy studies, the definitions tend to emphasise the possibility of meeting and forming unions between people in different social class positions. This research is aimed at demonstrating the issues of cross-class families in the context of class analysis. Consequently, the definition of cross-class families in this research will be closer to the former one. However, the definitions in homogamy studies will also be discussed to assist the conceptualisation of 'cross-class families'.

There are two key components of the definition. The first is 'cross-class'. The second is 'families'. 'Cross-class' is about how to define the class boundary. That is, if the social class of the male partner is compared with that of the female partner, which class boundary divides the two partners into different social classes? The second component is about how to define 'families'. The first component is more controversial than the second. It attracted almost all the attention of adherents and critics. Since ambiguities exist in the definitions of both

components, they will be discussed one by one in the following two sections.

4.2.1 Defining ‘cross-class’

Literature review

In the literature on class analysis, the meaning of ‘cross-class’, in the concept of ‘cross-class families’, is determined by the selection of the social class scheme classifying individuals. Sometimes, it is followed by another selection process, filtering class boundaries for cross-gender comparison. Although most researchers did not illustrate the details of defining ‘cross-class’, the selection process(es) could be identified. For example, Britten and Heath, who raised the issue of ‘cross-class families’ in class analysis, mainly adopted the Registrar General’s Social Class schema to classify both men and women (Figure 4.1). It contains six class categories with five divides (and two extra categories were added to describe people not in the labour force). Then they argued that only the ‘conventional manual/non-manual divide’ (between Class IIIN and Class IIIM) could be used to define ‘cross-class families’. Namely, only families ‘in which one spouse is in manual work and the other is in non-manual work’ could be regarded as ‘cross-class families’ (Britten and Heath, 1983, p.55). The other four class boundaries (between the economically active groups) were abandoned.

Families consisting of an economically active spouse and an economically inactive spouse (including unemployed, sick and houseworkers) were considered as ‘more traditional ‘single

career’ families’ rather than cross-class families (Britten and Heath, 1983, p.55). The class positions of these families are determined by the economically active spouse. For example, families consisting of two spouses both in the higher-level of nonmanual occupations were allocated to the top layer of the family class hierarchy. Families consisting of one spouse in the higher-level of nonmanual occupations and one economically inactive spouse were also allocated to the top layer. It suggests that the occupations of both spouses are important in classifying the family class, but not the economically inactive ones. It is arguably self-contradictory. It is not obvious how it could embody the advantages of “dual career’ families’ over the ‘single career’ ones if the occupations of both spouses were important.

Figure 4.1 Two selection processes of defining ‘cross-class’ using the Registrar General’s Social Class by Britten and Heath

1. The social class scheme for classifying individuals – The Registrar General’s Social Class and extra categories	2. The class boundaries for cross-gender comparison
Class I Professional etc. occupations	Non-manual
Class II Intermediate occupations	
Class IIIN Skilled occupations – non-manual	
Class IIIM Skilled occupations - manual	Manual
Class IV Partly skilled occupations	
Class V Unskilled occupations	
Unemployed, sick, etc.	
Houseworker	

Source: Britten and Heath, 1983, p.48, and p.50, Table 4.1.

It seems that Britten and Heath were aware of the problem of the Registrar General’s Social Class in cross-gender comparison. Only the most distinct and widely accepted class

boundary was kept. However, they were still not content with it and claimed that:

‘... we suspect ... the component categories of Class IIIN may themselves be unduly heterogeneous. We therefore regard it as an unavoidable ‘second-best’ at the moment to maintain Class IIIN intact, and the consequence of this, we suspect, will be to overestimate the number of ‘cross-class’ families ... but at the same time to underestimate their distinctiveness’ (Britten and Heath, 1983, p.53).

The heterogeneity in Class IIIN (junior non-manual occupations) they mentioned was the distinction between women in higher prestige occupations and women in lower prestige occupations. Since the latter are less likely to have a non-manual husband than the former, they were not sure if the families containing a wife in the lower prestige occupations and a husband in manual work could be considered as ‘cross-class families’. In their research, they raised this concern but did not exclude the questionable group from ‘cross-class families’ due to ‘the absence of further research’ (Britten and Heath, 1983, p.53). Unfortunately, it became one of the targets of critiques.

In addition, the market research classification (Figure 4.2) was used to examine the voting behaviour of families with different social class combinations. Similarly, the manual/nonmanual divide was used to identify ‘cross-class’ excluding the ‘single career families’. Britten and Heath claimed that the British Election Study contains more samples at the extreme ends of age groups, and a ‘greater proportion of housewives married to manual workers’ compared with the Child Health and Education Study. Thus, they adopted the market research classification used in the British Election Study. However, in their study

most of the analyses did not use this class scheme. It was neither used in analyses of examining the existence of cross-class families nor in generating the class scheme for the joint classifications. The lack of examination on the validity of the market research classification, and the inconsistency in the use of social class schemes resulted in a vague definition of ‘cross-class families’.

Figure 4.2 Two selection processes of defining ‘cross-class’ using the market research classification by Britten and Heath

1. The social class scheme for classifying individuals – The market research classification and extra categories	2. The class boundaries for cross-gender comparison
Class A Higher managerial and professional	Non-manual
Class B Lower managerial and administrative	
Class C1 Other non-manual	
Class C2 Skilled manual	Manual
Class D Unskilled manual	
Houseworker	

Source: Britten and Heath, 1983, p.48, and p.58, Table 4.3.

Goldthorpe, the most influential critic of cross-class families, pointed out several problems in Britten and Heath’s definition of ‘cross-class’ (1983). Firstly, he questioned the validity of the two social class schemes used by Britten and Heath, the Registrar General’s Social Class and the market research classification. He claimed that an appropriate social class scheme for class analysis should have two features. (1) It should be able to ‘distinguish systematically either between employers, self-employed and employees or between supervisory grades and rank-and-file workers’ (Goldthorpe, 1983, p.488). The two social class schemes used by

Britten and Heath failed to make clear distinctions among the above groups. For example, in Class IIIM small proprietors, self-employed craftsmen and foremen should be distinguished from the other skilled manual workers. This thesis will select a social class scheme which does distinguish these groups.

(2) It should show ‘the actual histories of employment or non-employment’ (Goldthorpe, 1983, p.472). He criticised that the two social class schemes used by Britten and Heath were both cross-sectional. He claimed that a snapshot of an individual’s occupation at one time point could hardly reflect the social class of the individual or the family. He believed that social class should be ‘relatively stable’ (Goldthorpe, 1983, p.483). However, he did not explain the reason why cross-sectional class comparison was acceptable in some analyses of intergenerational class mobility, but should not be used in the cross-gender class comparison, even exploratory ones (e.g. Goldthorpe and Payne, 1986; Goldthorpe et al., [1980] 1987, p.49, Table 2.2, and p.123, Table 5.1). Since this thesis is an exploratory study on cross-class families, it examines cross-class families from a cross-sectional perspective. However, it is worth taking a longitudinal perspective in future research to obtain a bigger picture about cross-class families, especially about the transformation of both partners’ employment throughout the life course.

Secondly, he questioned the validity of using the manual/nonmanual divide in cross-gender class comparisons. Two reasons were given. (1) He pointed out that there was no evidence to

support the application of the manual/nonmanual divide in the measuring of women's social class, let alone the use in cross-gender class comparison.

(2) Women in the lower-level nonmanual occupations and men in manual occupations should not be classified into two different social classes. He claimed that women in the lower-level nonmanual occupations tended to have lower levels of 'pay ... pay increments, sickness benefit, pensions, etc.', and less chance of upward mobility than their male counterparts in the same occupations. The disparities of 'promotion chances' between women in the lower-level occupations and manual occupations were not as significant as that of men in these two groups. He also argued that families, where the wife was in a lower-level nonmanual occupation and the husband was in a manual occupation, were 'highly unstable', since these women frequently moved to manual occupations (Classes VI and VII of the Hope-Goldthorpe occupational scale). The problem of his evidence was that there was no direct comparison between the class characteristics of women in the lower-level nonmanual occupations and men in manual occupations. It was not obvious how the conclusion may be justified (Goldthorpe, 1983, p.480).

In addition, if women in nonmanual occupations and men in manual occupations were considered as in different social classes, the class mobility rates of British society would be much higher than they had been found. He then concluded that female nonmanual workers and male manual workers may be engaged in the same "dead-end' positions' which were

‘essentially ... an exchange of wages for labour’ (Goldthorpe, 1983, p.481). The argument is problematic. Different results do not necessarily mean the alternative approach is wrong.

In his paper, he made a cross-gender class comparison using the Hope-Goldthorpe scale. Figure 4.3 shows that the ways of classifying men’s social class and women’s social class were different. For men, intergenerational class mobility was used and five categories were generated. However, for women, intragenerational class mobility was used and seven categories were generated. In his discussion about cross-gender class comparisons, the first three stable groups of men were frequently mentioned corresponding to the service, intermediate and working class, while the way of combining women’s social classes into three corresponding groups was not mentioned. Moreover, even if two spouses were in ‘significantly’ different class positions, he claimed that it was not necessary to consider these families as ‘cross-class families’. For example, families where the husband’s class position was higher than the wife’s were not considered as ‘cross-class families’. Thus, it was quite hard to detect the boundaries and distributions of class-homogenous families and cross-class families. He criticised the idea of ‘cross-class families’ in order to show that the ‘class still remains the basis of homogamy’. Unfortunately, the ambiguity and inconsistency in his definition of social class for men and women (e.g. intergenerational mobility for men and intragenerational mobility for women) weakened his findings and arguments about the cross-gender class comparison (Goldthorpe, 1983, p.479, 482).

Figure 4.3 Two selection processes of classification for cross-gender class comparisons using the Hope-Goldthorpe scale by Goldthorpe

1. The social class scheme for classifying the class mobility experience of individuals – The Hope-Goldthorpe scale ⁱ	2. The class boundaries for cross-gender comparison
Men (intergenerational class mobility)	
Stable in Class I	Service class
Stable in Classes III-V	Intermediate class
Stable in Classes VI and VII	Working class
Upwardly mobile to Class I from origins in Classes III-VII	
Downwardly mobile from Class I origins to Classes III-VII	
Women (including the employment at marriage, held for greatest number of years after marriage, and at time of interviewⁱⁱ)	
Class I	Service class (Professional, administrative and managerial positions) ⁱⁱⁱ
Class II	
Class IIIa	Intermediate class (Intermediate positions) ⁱⁱⁱ
Class IIIb	
Class IV+V	
Class VI	Working class (Manual work) ⁱⁱⁱ
Class VII	

Note:

i The Hope-Goldthorpe scale:

Class I Higher-grade professionals, administrators and managers, large proprietors;

Class II Lower-grade professionals, administrators and managers;

Class III Routine nonmanual employees in administration, sales and service (including Class

IIIa Routine nonmanual employees in clerical and kindred occupations; Class IIIb Routine nonmanual employees in other, mainly sales and service occupations);

Class IV Small proprietors, self-employed workers without employees;

Class V Supervisors of manual workers;

Class VI Skilled manual workers;

Class VII Semi- and unskilled manual workers

ii It seems that, in cross-gender class comparisons, Goldthorpe preferred to consider the employment status of women in all three periods.

iii Goldthorpe did not give a clear demonstration on where and how the social class boundaries should lie in the cross-gender comparison. The three combined class positions were inferred from the context of his paper.

Source: Goldthorpe, 1983, p.471, Table 1; p.476, Table 4.

After such critiques, McRae (1986) still found a way to define ‘cross-class’ in a qualitative study containing the interviews of thirty ‘cross-class families’. She was, to some extent, aware of Goldthorpe’s critiques so she narrowed down the definition. On the one hand, she used the same social class scheme as Britten and Heath’s, the Registrar General’s Social Class. Single-career families were also excluded from ‘cross-class families’. She did not give any reason for the decision. On the other hand, she excluded two types of families from the definition of ‘cross-class families’ in accordance with Goldthorpe’s critiques. One is families where the husband’s class position was higher than the wife’s. She hardly gave any reason for this exclusion. The other is the families where the wife was in lower-level routine nonmanual work and the husband was in manual work. The only class boundary she accepted was the one between men in manual work (Classes IIIM, IV and V of the Registrar General’s Social Class) and women in the higher level nonmanual work (Classes I and II). She also considered social mobility experience. Spouses who were different in terms of class origin as well as class destination are considered as ‘pure’ cross-class’ (McRae, 1986, p.34). The other cross-class families were further categorised according to the intragenerational mobility.

In 1987, the Registrar General’s Social Class was again adopted in the analyses about cross-class families by Abbott and Sapsford (1987, p.102, Tables 37 and 38). It is different from Britten and Heath’s and McRae’s work. The distinction is that all class boundaries in the cross-gender class comparison were kept. If the social classes of two partners were on

opposite sides of any class boundary defined by the Registrar General's Social Class, the two partners would be viewed as 'cross-class'.

Another difference was that they did not exclude relatively 'traditional' families. Instead, they split families into three groups: (1) husband's class was higher than wife's (relatively traditional ones); (2) husband's class was the same as wife's (less controversial ones); and (3) husband's class was lower than wife's (controversial ones). This division was accepted by Graetz in his study of Australian cross-class families in 1991. The first type of family was considered as class homogenous by Goldthorpe without any empirical support (1983, p.479). They were disregarded in McRae's study. On the contrary, Carling pointed out that the exclusion of these families from cross-class families was 'an indication of the bias' (1991, p.285). This thesis includes them in 'cross-class families', since they have not been proved class homogenous.

In Marshall and his colleagues' study, 'cross-class' was defined by the sevenfold Goldthorpe class category ([1988]1993, p.72, and the wording of the class scheme at p.21). It is different from Goldthorpe's own cross-gender class comparison for the issue of 'cross-class families' in 1983, as Marshall and his colleagues applied the same social class scheme to both men and women from a cross-sectional perspective. Class boundaries between the service class (Classes I and II) and the intermediate class (Classes III to V), the intermediate class and the working class (Classes VI and VII) were kept to define 'cross-class'.

In the non-British literature of cross-class families, almost all studies applied Wright's class scheme (Graetz, 1991, p.104). Furthermore, almost all of them applied the same class scheme to classify men and women. However, the second selection process was often different. If a two-career family crossed any class boundary of Wright's class scheme, Leiulfsrud and Woodward would regard it as 'cross-class' (1987). In their research all class boundaries of Wright's class scheme were kept to define 'cross-class'. They especially focused on families where one of the partners was in the working class. Baxter also applied Wright's class scheme, but only four (mainly three) out of eight class boundaries were kept for defining 'cross-class' (1988, p.113, and the wording of the class scheme at p.111).

It is notable that these two studies both assigned class positions to people not in the labour force according to the partner's class. However, Wright considered single-career families as cross-class families (1989). In his study, a six-category Wright's class scheme was applied. In the definition of 'cross-class', there were two boundaries which were among the self-employed, the middle class, and the working class. In his later works, the class boundaries used in the cross-gender class comparison were changed to property, authority and skill boundaries (1997, 2004).

Graetz's study also applied Wright's class scheme (1991). Similar to Leiulfsrud and Woodward, he adopted all class boundaries to define 'cross-class'. Instead of rejecting some class boundaries, he invented the typology to distinguish families with a different degree of

class heterogeneity: (1) Couples across the boundaries of the sevenfold Wright's class scheme rather than the threefold one (i.e. the employers and owners, the middle class, and working class) had the lowest level of class heterogeneity, and were called 'class compatible' couples. (2) Couples across only one of the boundaries of the threefold Wright's class scheme had a moderate level of class heterogeneity, and were called 'class mixed' couples. (3) Couples across two of the boundaries of the threefold Wright's class scheme (i.e. one partner was an employer or owner and another was in working class) had the highest level of class heterogeneity, and were called 'class opposing' couples.

It is a sensible classification since class compatible families may be very distinctive from class opposing families but similar to class-homogenous families in terms of the degree of the socio-economic discrepancies between the two partners. Although partners in class compatible families might be similar, they are 'cross-class' in accordance with their own class position. This method, to some extent, solved the problem raised by the critiques that the market and work situation of the lower-level nonmanual female workers might be similar to the male manual workers'. Through this typology, families consisting of the wife in the lower-level nonmanual occupations and the husband in manual occupations could be viewed as 'cross-class families'. The degree of class heterogeneity of these families was lower than class opposing families. This thesis will adopt the typology with some modifications.

Graetz excluded families where one or both partners were not in the labour force from

cross-class families. It is better than Britten and Heath's (1983), Leiulfsrud and Woodward's (1987) and Baxter's (1988) ways of treating single-career families. These researchers believed that the economically inactive partner had no effect on the family class, but the effect of the economically active one was significant. This argument ignored the social and economic disadvantages of the economically inactive partner compared with their employed partner. For the same reason, it is more appropriate that Wright thought of single-career families as cross-class families (1989). Unfortunately, Wright gave up this position in his later studies on cross-class families, and adopted Greatz's position (1997, 2004). This thesis will take Wright's position in 1989.

In this section, I reviewed the definitions of 'cross-class' in the key literature of 'cross-class families' in both British and non-British sociology. In the next section, I will introduce the definition of 'cross-class' for this research.

What is 'cross-class'?

In the literature, the two selection processes imply that researchers could hardly find any social class scheme appropriate for the cross-gender class comparison, unless some class boundaries were excluded. If there was such a social class scheme, the second selection processes would not be necessary. In the research on cross-class families, it is necessary to select a social class scheme which not only appropriately classifies the social classes of

individuals, but also allows cross-gender comparison. In this case, the two selection processes could be combined.

This research uses the NS-SEC, the 2005 version, to define ‘cross-class’ (Figure 4.4). The classification is based on Goldthorpe’s employment relation theory. It categorises individuals according to the features of their employment contract. It is further divided into two indicators:

‘(i) the degree of difficulty involved in monitoring the work performed by employees: that is, the degree of difficulty involved both in measuring its quantity and also in observing and controlling its quality; and

(ii) the degree of specificity of the human assets or human capital – skills, expertise, knowledge – used by employees in performing their work: that is, the degree to which productive value would be lost if these assets were to be transferred to some other employment’ (Goldthorpe, 2000).

Figure 4.5 demonstrates the relationships between different types of the employment contract and the two indicators of the employment relation (i.e. the specificity of human assets and the difficulty of work monitoring). The service contract is characterised by the high level of difficulties of work monitoring and highly specified human capital. People in managerial and professional occupations tend to have this type of contract. In contrast, the labour contract is characterised by the low level of difficulties of work monitoring, and rarely requires specified expertise and knowledge. People in the sale- and service-related intermediate, semi-routine and routine occupations often have this type of contract. In the middle of these

Figure 4.4 The NS-SEC

8-class version	3-class version
I Higher managerial, administrative and professional occupations (HMAP)	I+II Managerial and professional occupations/Service class
II Lower managerial, administrative and professional occupations (LMAP)	
III Intermediate occupations (INT)	III+IV Intermediate occupations/Intermediate class
IV Small employers and own account workers (SEOA)	
V Lower supervisory and technical occupations (LST)	V-VIII Routine and manual occupations/Working class
VI Semi-routine occupations (SROU)	
VII Routine occupations (ROU)	
VIII Currently not in the labour force (CNLF)/Never worked (NW) ⁱ	

Note:

i If the NS-SEC is based on respondents' current job, Class VIII contains people who were not in the labour force at the time of the interview. If the NS-SEC is based on respondents' most recent job, Class III contains people who had never been worked.

ii The full-version of the NS-SEC is in Note [1]. The other analytic class variables of the NS-SEC are in Note [2].

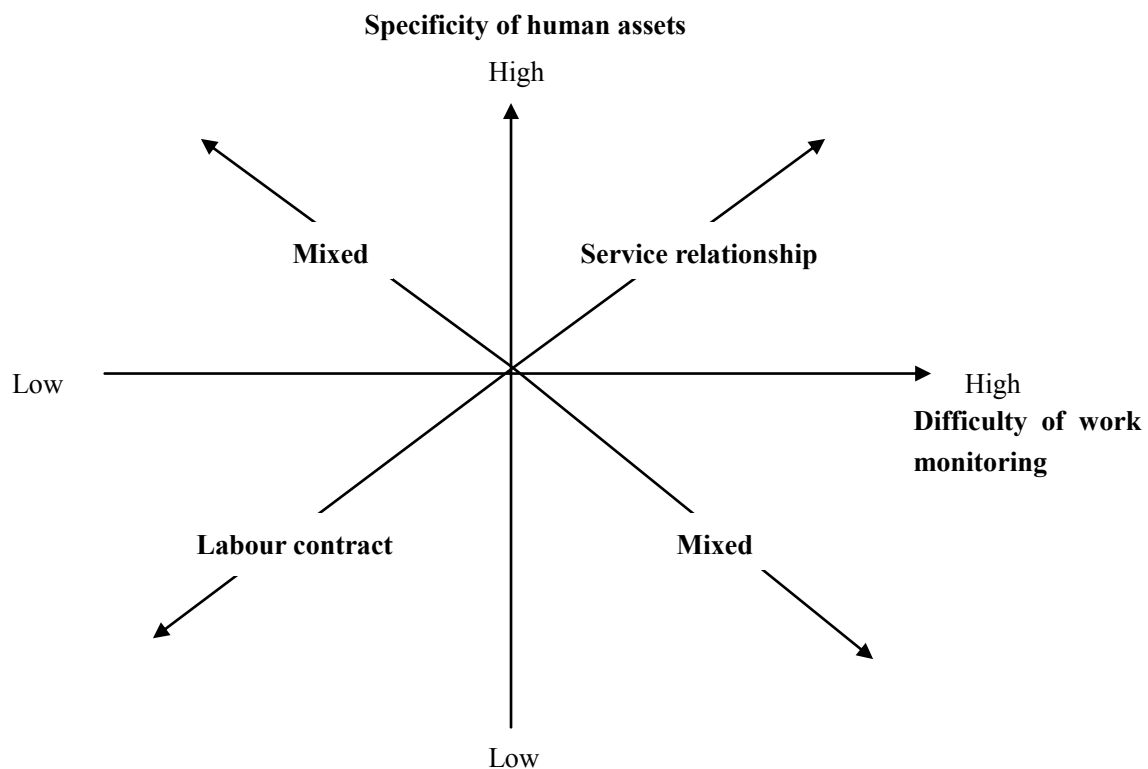
Source: ONS, 2005b, p.35, Figure 3; p.38, Figure 4.

two extremes, there are two types of contracts. The first is the employment contract characterised by highly specified human capital and the low level of difficulties of work monitoring. It normally relates to people in lower supervisory and technical occupations. The second is the employment contract characterised by less specified human capital and high-level of difficulties in work monitoring. People in the administration- and commerce-related intermediate occupations are more likely to have this type of contract.

A similar principle was used in the categorisation of the NS-SEC (Figure 5.6). It first distinguishes employers, employees, the self-employed and economically inactive people

according to the employment relation. Then all employees are further divided into the service relationship, the intermediate and the labour contract in accordance with the employment regulation.

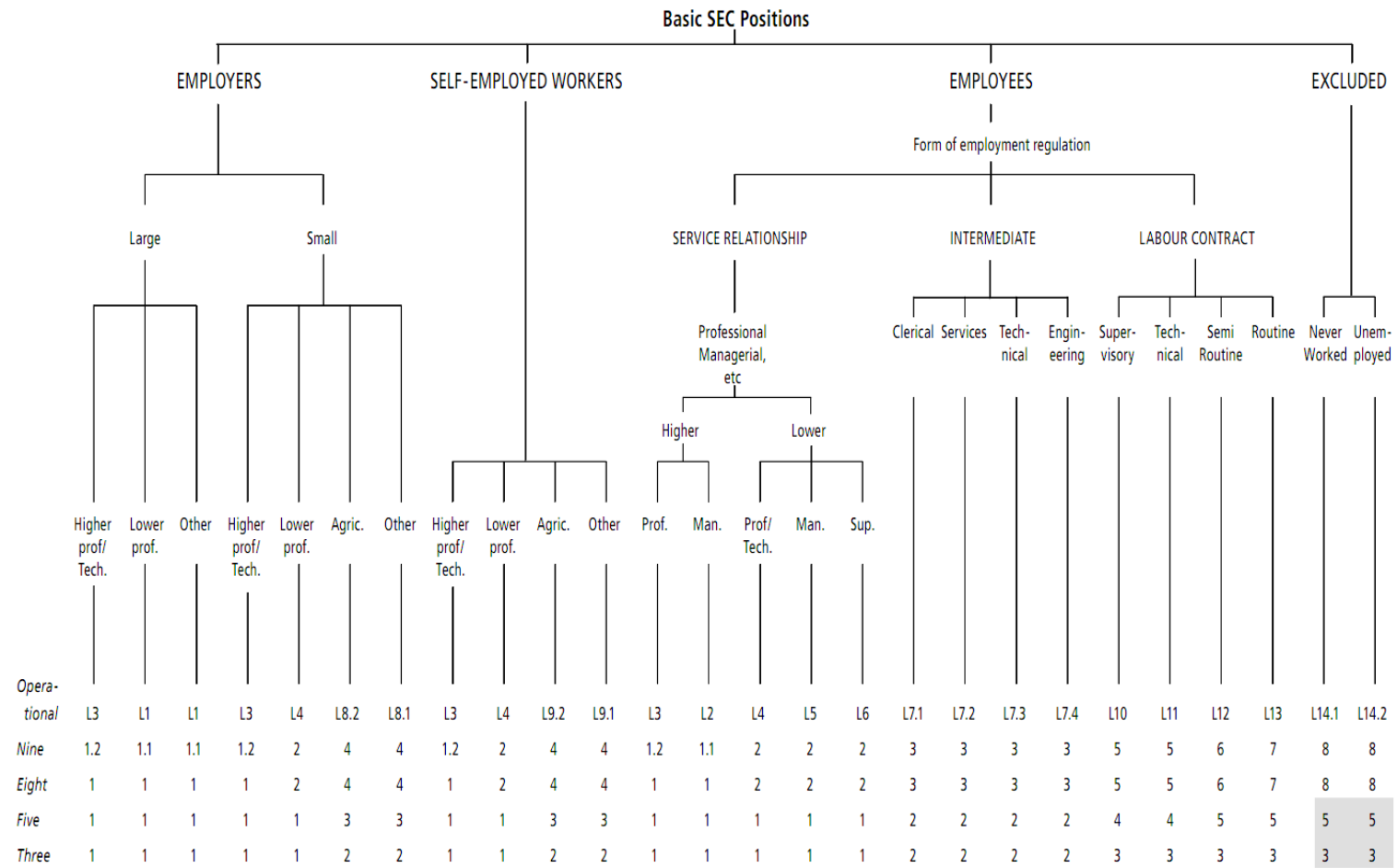
Figure 4.5 The employment relation coordinate



Source: Goldthorpe, 2000, p.223, Figure 10.2.

The reasons why this social class scheme is selected are as follows. First, the employment relation theory was based on British society. The idea was generated from the 1972 Oxford (Nuffield) Mobility Study. It surveyed a national representative sample containing 10,309 men aged 20 to 64 in England and Wales (Goldthorpe et al., [1980] 1987, p.40). Respondents were asked to rank the social standing of several lists of occupations. Then the earliest

Figure 4.6 The categorisation of the NS-SEC



Source: ONS, 2005b, p.17, Figure 1

version of the Goldthorpe schema was generated. Over the last four decades, it has been widely used in sociological studies, especially studies of class analysis. The schema has been updated several times. The NS-SEC could be considered as the most up-to-date class scheme applying Goldthorpe's employment relation theory. The classification was based on the latest version of the Standard Occupational Classification 2000 (SOC2000), and the employment relation theory was examined through the 1996/97 Labour Force Survey. In this respect, the NS-SEC is better than Wright's class scheme, since the latter was mainly based on American society.

Second, the NS-SEC expanded the coverage of occupations compared with the Registrar General's Social Class and Socio-economic Groups. The employment relation theory has been widely examined and accepted which formed a sounder basis for the social classification. Moreover, the NS-SEC meets Goldthorpe's requirement for a social class scheme which not only differentiates employers, the self-employed, and employees, but also distinguishes supervisors from rank-and-file workers. By using the NS-SEC, some critiques about the manual/nonmanual divide lose their target.

Third, compared with the CAMSIS, the NS-SEC is a relatively developed class scheme. The NS-SEC has the merits of the Goldthorpe schema, and is also consistent with the Registrar General's Social Class and the Socio-economic Groups. All three predecessors of the NS-SEC were widely used and examined. For example, Evans and his colleague conducted

several studies about the validation of the Goldthorpe schema (Evans, 1992, 1996, 1998; Evans and Mills, 1998, 2000). The validity of the NS-SEC *itself* has also been examined. Positive evidences have been found in different dimensions, such as its face validity, content validity, criterion validity and construct validity (ONS, 2005b, p.100-104). In addition, the categorical class scheme (e.g. NS-SEC) is closer to the class perception of real life than the continuous class scheme (e.g. CAMSIS). It is also relatively more difficult to identify the class boundaries using a continuous class scale. In this exploratory study of cross-class families, it would be better to use a categorical class scale. It is worth trying CAMSIS in future research.

Fourth, the NS-SEC is relatively more appropriate for cross-gender class comparison, if not the best. Evans found that the Goldthorpe class schema can classify both women and men. The only disparity was that the association between job characteristics and class positions was weaker in the female sample than in the male sample. He believed that this discrepancy was caused by gender inequality in real life rather than the weakness of the Goldthorpe class schema (1996). The NS-SEC improved the way of classifying women. Although it is still gendered, the validity tests proved that the NS-SEC was quite robust even for part-time female workers in terms of employment relations (ONS, 2005b, p.47, 56).

Fifth, the coverage of the NS-SEC is the wider than the two earlier government social class schemes, Goldthorpe schema and Wright schema. It covers people who are not in the labour

force, such as the long-term unemployed, those who have never worked and full-time students (Figure 4.4; ONS, 2005b, p.23, Figure 2). In the literature, families which contain one or two partners who were out of the labour force were treated differently: Some included single-career families in cross-class families (e.g. Wright, 1989); some excluded these families from cross-class families (e.g. McRae, 1986; Graetz, 1991); others thought of these families as class-homogenous families whose family class position was determined by the working partner's social class (e.g. Britten and Heath, 1983; Leiulfsrud and Woodward, 1987; Baxter, 1988). By applying the NS-SEC, people not in the labour force are assigned a social class position according to their employment status rather than their partner's occupation. Furthermore, they could be included in the cross-gender class comparison for the analysis of cross-class families.

The full version of NS-SEC 2005 contains seventeen main categories. It may be collapsed into shorter versions with different numbers of analytic classes. This research mainly uses the eightfold version which is very similar to the widely used sevenfold Goldthorpe class scheme. This version was recommended by the ONS (2005) because the eight-class version has the maximum between-group difference and the minimum within-group difference compared with the other analytical versions. The three-class version is also used in some analyses of this research, since this division is better than the manual/nonmanual division and has also been widely recognised (Figure 4.4). The categories of the three-class version are the most distinct compared with the other versions. Moreover, the life chance and class

behaviour of the self-employed is different from all the other groups in the eightfold version. Hence, one of the weaknesses of the three-class version is that it combined the self-employed and the intermediate occupations (ONS, 2005b, p.39).

To sum up, in this research, ‘cross-class’ families are families which cross any class boundary of the eightfold NS-SEC.

4.2.2 Defining ‘families’

‘Families’ rather than ‘households’

In the literature of cross-class families, the term ‘cross-class households’ was occasionally used as an alternative to ‘cross-class families’ (Marshall et al., [1988] 1993; Wright, 2004). Researchers rarely gave any explanation about it, and often applied the two notions in the same way. However, ‘families’ and ‘households’ are different. The ONS defined ‘households’ as ‘people who live and eat together or people who live alone’. It may contain only one person (the majority of households are single-person households), several tenants, or two or more families. In contrast, ‘families’ was defined through ‘marriage, civil partnership or cohabitation or, where there are children in the household, child/parent relationships exist’ (ONS, 2011a, p.3). In the literature on cross-class families or cross-class households, ‘families’ and ‘households’ often referred to conjugal couples (e.g. Britten and Heath, 1983; McRae, 1986; Baxter, 1988; Graetz, 1991; Marshall et al., [1988] 1993; Wright,

1997). Sometimes they also referred to cohabiting couples (e.g. Leiufsrud and Woodward, 1987). It seems that the concept, ‘families’, is more appropriate to describe the research subject than ‘households’.

Both married and cohabiting couples

Conventionally the literature about class analysis mainly focuses on married couples. To be consistent with it, this research includes conjugal families. As mentioned in the last section, Leiufsrud and Woodward’s research on cross-class families examined both married and cohabiting couples. This research will also include cohabiting (unmarried) families.

Nowadays, it is easy to find cohabiting families. The proportion of this type of family increased from 9 per cent in 1996 to 14 per cent in 2006. The proportion of heterosexual cohabiting couples will increase steadily by about two thirds in the next 25 years (ONS, 2009). At the same time, the proportion of conjugal families decreased from 76 per cent to 71 per cent (ONS, 2007). Furthermore, people at age 25 to 34 are more likely to be cohabiting (20 per cent) than married (less than five per cent), lone mother (approximately 15 per cent), or lone father (approximately seven per cent). By the age of 45, the majority of the British population experienced cohabitation at least once (ONS, 2009). To some people, cohabitation is an alternative to marriage rather than merely the preparation for marriage. Since cohabiting families have a lot of features which are more or less similar to conjugal

families, such as sharing a dwelling, sharing expenditure or rearing children, it is worthwhile and plausible to include these families in the research on cross-class families.

Nuclear families

More specifically, cross-class families are nuclear families. It is possible that more than two generations live in the same household. In this research, families refer to those which contain only one married or cohabiting couple and their dependent children if they have any. Even if couples are living with their independent children, the children are considered to be in a different family unit from their parents.

Heterosexual families

In addition, this research focuses on heterosexual cross-class families. The number of people in civil partnerships has been growing, and perhaps in same-sex couples more generally. It is worth studying this type of family. However, the within-couple class comparison in homosexual families may be very different from that in heterosexual families. For example, gay and lesbian families do not have problems of cross-*gender* class comparison. Analysing same-sex cross-class families will need a different theoretical framework and methods. Therefore, homosexual cross-class families are beyond the scope of this thesis. This research is consistent with the literature on cross-class families and focused on heterosexual

cross-class couples.

To sum up, ‘families’ in the notion of ‘cross-class families’ refers to those containing a married or cohabiting adult heterosexual couple, and their dependent children if there are any.

4.2.3 Defining ‘cross-class families’

In this section, I defined ‘cross-class’ and ‘families’. According to the definition of the two key elements, ‘cross-class families’ (CCFs) refers to families which consist of only one couple occupying different social class positions in accordance with the eightfold NS-SEC and their dependent children if there are any. More specifically, the couples who are married or cohabiting are heterosexual couples. They are adults rather than dependent children. In contrast, class-homogenous families (CHF) refer to families where both the male partner and the female partner were in the same social class position of the eightfold NS-SEC and their dependent children if there are any.

4.3 Measuring cross-class families

In the last section, ‘cross-class families’ were defined through reviews and discussions about the two key components. In this section, I will explain how to measure ‘cross-class families’ and conduct some preliminary analyses. Before that, it is necessary to discuss the issue about

the basic unit of the social class, and explain how to measure the social classes of individuals.

4.3.1 Unit of analysis

In the literature of the class analysis, conventionally, families were viewed as the basic unit of the social class. Three reasons given by Talcott Parsons were mentioned by Goldthorpe in his defence of the conventional view: (1) If the social positions of family members were different, they would compete with each other. The family stability would be in danger. (2) The community required a unique family status in order to distinguish the family members from members of the other families. (3) If both partners have equal commitment to paid work, it would be very hard to negotiate for the residential relocation (Goldthorpe, 1983, p.466). No empirical evidence was given. Even if these arguments were true, it could not be the reason why families were the basic unit of the social class rather than individuals. There might be some families which are relatively unstable, have family members with different social status, and have difficulties in deciding the residential relocation. Researchers should not arbitrarily ignore this possibility and take the view that all families are the same.

Goldthorpe admitted that the above three arguments were functionalist views, which was the main target of some critiques. He then gave three other reasons to defend the conventional view: (1) The roles, according to ‘conventional norms’, of men and women in families were

different. Men 'ha(ve) the fullest commitment to participation in the labour market', while women 'are required ... to take major responsibility for the performance of the work that is involved in maintaining a household and rearing children'. Due to the difference of gender roles, conventional class theories believed that men were the main breadwinner and women economically depend on their husband (Goldthorpe, 1983, p.468). Thus, the class position of all family members should be determined by the male partner. However, the Labour Force Survey in 2004 revealed that over half of two-parent families with the youngest dependent child aged four or less were dual-career families. Approximately three per cent of families contained a female breadwinner and an economically inactive male partner. In two-parent families with the youngest dependent child aged 16 to 18, about eight in ten were dual-career families. Approximately six per cent had a female breadwinner and an economically inactive male partner (ONS, 2005a, p.14, Table 1). These findings show that not all families are as 'traditional' as the conventional class theories believed. Consequently, it is problematic to apply the 'conventional norms' to all families.

(2) The second reason is that 'lines of class division and potential conflict run between, but not through, families' (Goldthorpe, 1983, p.468). However, it is possible that the class conflict also runs through families. For example, during the Cultural Revolution in China, some people claimed that their social class was different from their parents' or their spouse's. Some children even denounced their parents in the class conflict (Hays, 2008). Brynin and his colleagues found that some partners have different partisanship although partners might

influence each other in this respect (Brynin et al., 2009b). It is questionable whether the 'potential conflict' and the 'class division' only run between rather than through families.

(3) According to Goldthorpe, family 'is the major unit of reward'. As a result, family members may generate similar interests (Goldthorpe, 1983, p.469). However, individuals could also be the unit of some rewards. Not all rewards could be equally shared with other family members, for instance the social rewards for an individual's specialities. Even economic rewards might not be equally reallocated in the family (Vogler, 2005).

Stanworth, one of the defenders of cross-class families, proposed a new approach of measuring family class, the individual approach. It suggested that both men and women's social class could be determined by their own occupations (Standworth, 1984). This approach is adopted by this research, because it is the prerequisite of 'cross-class families'. Individuals should have their own social class positions. Then, the social class positions of family members are compared in order to identify 'cross-class families'.

This research accepts both the individual level social class and the family level social class, that is, both individuals and families could be the unit of the social class. The social classification at the individual level shows the socio-economic inequality among individuals in accordance with their occupations. It also shows the disadvantage of the economically inactive ones. The social classification at the family level shows the socio-economic

inequality among families. It is determined by the socio-economic features of every family member. In this research, the family level social class is estimated by the occupations of both partners. It is known as the ‘joint classification’ (Britten and Heath, 1983).

4.3.2 Measuring the social classes of individuals

Before explaining how to measure cross-class families, it is necessary to explain how to measure the social classes of individuals. In Section 4.2, I discussed why the eightfold and threefold NS-SEC was selected to classify the social positions of individuals. In this section, I will start with a discussion about three important issues in applying the NS-SEC. After that, I will conduct some preliminary analyses of the social classes of individuals.

Methods

ONS claimed that the NS-SEC is a categorical variable, since it is generated from employment relations (2005b, p.39). In practice, social classes are often treated as ordinal variables, although they are *sometimes* regarded as only categorical (Pahl, 1993). Almost all social class schemes (e.g. Goldthorpe’s class schema, Registrar General Social Class, Socio-Economic Groups, and Wright’s class schema) have similar rankings, which start with service class occupations, then intermediate class occupations and end with working class occupations. Moreover, ONS recommended a ranking of precedence which acknowledges the underlying ordinal feature of the scheme (2005b, p.41). However, this thesis will not

follow that ranking since it has not been validated. Instead, the foundation of the NS-SEC, Goldthorpe's class schema, was found as 'hierarchical' and validated (Evans, 1992, p.227). Therefore, in this thesis, eight-class and, occasionally, three-class NS-SEC, which have the similar ranking order as Goldthorpe's class schema, will be used as ordinal variables.

The NS-SEC covers not only people in gainful employment but also people not in the labour force at the time of the interview (Class VIII in Figure 4.4). Full-time students are excluded since they often do not have a paid job or still depend on their parents. Conventionally, their social class was determined by their parents' occupations.

There are two variables of the NS-SEC available in the BHPS 2008 (wave 18). One is measured by a respondent's current job (i.e. the paid job at the time of the interview). Another is measured by the most recent job (i.e. current job, or the last job if not in the labour force at the time of the interview). Marshall and his colleagues found that the health of the retired and unemployed men was well classified by their last main job (Marshall et al., 1996). The unemployed might keep in touch with previous colleagues. Their class attitude and behaviour might be influenced by the work experience of the last job. They might be able to maintain their life chance for a while (Payne and Abbott, 1990). The social class of the short-term unemployed might be close to their previous colleagues, but different from the long-term unemployed and those who have never worked.

There have been controversies about the divide between the short-term unemployed and the long-term unemployed. The official 1991 Census adopted the ten-year cut-point (ONS, 1998, p.54). ONS recommended six-month, one- or two-year rules. Six month is the maximum length of receiving contribution-based Jobseekers' Allowance (ONS, 2005b).

In the BHPS, the job history is available, but it is complicated to check. This research uses both the current job and the most recent job to determine the social classes of individuals. It is notable that the distinction between the current-job NS-SEC and the most-recent-job NS-SEC is the way of classifying people who were not in the labour force at the time of the interview but did have a job once (Figure 4.4). The thesis focuses on presenting the current-job NS-SEC. If the results obtained through the most-recent-job version are different from the current-job version, they are also discussed. The data analyses using the most-recent-job version are mainly to be presented in notes.

Corresponding social class variables in the BHPS are 'rjbsec' (for the current job) and 'rmrjsec' (for the most recent job). The current job variable derives from 'rjbsoc' (the occupation coding of the current main job), 'rjbsemp' (employed or self-employed), 'rjbboss' (whether or not have hired employees), 'rjbmngr' (managerial duties) and 'rjbsize' (the number of people employed at the workplace). The variable of the most recent job derives from similar variables for the most recent job.

The distribution of the social classes of individuals

Table 4.1 The distribution of the social classes of individuals, 2008

	Column percentages	
	8-class version	3-class version
I HMAP	7.0	
II LMAP	16.2	23.2
III INT	8.2	
IV SEOA	5.5	13.7
V LST	5.0	
VI SROU	9.0	
VII ROU	6.1	
VIII CNLF	42.1	62.1
Missing ⁱ		1.0
Total %		100.0
Weighted N		15527.4

Note:

i Missing cases are those who gave inappropriate answers or did not give answers.

ii The most-recent-job version is in Note [3].

Source: BHPS, 2008

In Table 4.1, according to the current-job NS-SEC, approximately 57.9 per cent of adults were economically active. About four in ten adults (42.1%) were not in workforce at the time of the interview. The latter contained those who have never worked, retired, long-term unemployed, short-term unemployed, on temporary leave and full-time students. The largest occupational group is Class II, lower managerial, administrative or professional occupations (16.2%). The smallest social class is Class V, lower supervisory occupations (5.0%). There were 23.2 per cent of adults in the service class. The size of the working class is nearly three times as large as the service class (62.1 %). The intermediate class is the smallest group of the three, 13.7 per cent.

The distribution pattern of the economically active people classified by their most recent job was similar to the current-job version. However, the size of the working class according to the most-recent-job NS-SEC was about half of that using the current-job version. Approximately 2.9 per cent of adults had never had any paid job. Approximately 59.2 per cent of adults who were not in the labour force at the time of the interview had work experience.

Table 4.2 shows the distribution of two genders in each social class in 2008. Economically active men dominated Classes I, IV, V and VII. In contrast, women dominated Classes III and VI. In the service class, men dominated the higher-level occupations (Class I). In the lower-level service class (Class II), men and women were quite evenly distributed. In the intermediate class, the overwhelming majority of Class III was male. People in this class had more authority over work than in Class IV. The routine nonmanual occupations of the Erikson-Goldthorpe class scheme were very similar to Class IV of the NS-SEC. As expected, it was dominated by women.

In the working class, the ‘elite’ working class (Class V) and the routine occupations were dominated by men (ONS, 2005b, p.37). Since Class V has supervision features or requires special skills, it gets some service characteristics. They have more opportunity of promotion, greater autonomy and are typically paid by salaries instead of weekly or hourly wages (Erikson and Goldthorpe, 1992, p.43). Another class dominated by men, Class VII, was the

Table 4.2 The distribution of two genders by social class, 2008

		Row percentages	
		Men	Women
I HMAP	All	70.6	29.4
	Married & cohabiting ⁱ	72.8	27.2
II LMAP	All	44.3	55.7
	Married & cohabiting	47.0	53.0
III INT	All	29.0	71.0
	Married & cohabiting	27.4	72.6
IV SEOA	All	70.9	29.1
	Married & cohabiting	72.3	27.7
V LST	All	78.2	21.8
	Married & cohabiting	78.6	21.4
VI SROU	All	37.8	62.2
	Married & cohabiting	34.9	65.1
VII ROU	All	65.7	34.3
	Married & cohabiting	66.6	33.4
VIII CNLF	All	39.5	60.5
	Married & cohabiting	42.9	57.1
Total %	All	46.7	53.3
	Married & cohabiting	49.6	50.4
Weighted N	All	6962.1	7942.4
	Married & cohabiting	4673.1	4743.4

Note:

i Adults in heterosexual relationships.

ii The most-recent-job version is in Note [4].

Source: BHPS, 2008

lowest class of the economically active groups. It is characterised by the labour contract which has the ‘least need for employees to be allowed autonomy and discretion and external controls can be most fully relied on’ (Erikson and Goldthorpe, 1992, p.43). In addition, the majority of people out of the labour force at the time of the interview were women. This distribution reveals that men were more likely to be economically active and dominated the

higher layers of the three large social classes (i.e. the service class, intermediate class and working class).

The distribution pattern of the married and cohabiting adults is similar to all adults. The distribution pattern of the social class defined by the most-recent-job NS-SEC was similar to that of the current-job NS-SEC. The only exception was Class VIII. The numbers of men and women who never did paid work were similar (53.4% was male and 46.6% was female). However, with regard to people in intimate relationships (married or cohabiting), the overwhelmingly majority of people who had never worked were female (90.5%). It suggests that women were more likely to be long-term homemakers.

Table 4.3 shows that in 2008, economically active men were aggregated in managerial and professional occupations (Classes I and II). In the working class, economically active men were evenly distributed in three classes (Classes V, VI and VII). Men in intermediate occupations (Class III) made up the smallest proportion of male adults.

Women were aggregated in Classes II, III and VI. In the service class, the majority of women were in the lower-level occupations (Class II). In the Intermediate class, the overwhelming majority of women occupied intermediate occupations (Class III) rather than worked as the self-employed or own account owners (Class IV). In the working class, the largest proportion of women was in semi-routine occupations (Class VI). In all eight classes, it was least likely

to find women in the lower supervisory and technical occupations (Class V).

Table 4.3 The class distribution by sex, 2008

	Column percentages			
	All		Married and cohabiting	
	Men	Women	Men	Women
I HMAP	10.5	3.8	12.6	4.6
II LMAP	15.3	16.9	17.5	19.5
III INT	5.1	11.0	4.8	12.7
IV SEOA	8.4	3.0	10.0	3.8
V LST	8.4	2.0	8.5	2.3
VI SROU	7.3	10.6	6.3	11.7
VII ROU	8.7	4.0	8.8	4.3
VIII CNLF	36.2	48.6	31.5	41.2
Total %	100.0	100.0	100.0	100.0
Weighted N	6962.1	7942.4	4673.1	4743.4

Note:

i The most-recent-job version is in Note [5].

Source: BHPS, 2008

If the most-recent-job version was used, the pattern would have a slight change. In the service class, both men and women were more likely to aggregate in the lower-level occupations. The distribution patterns of married and cohabiting men and women were the same as all adults.

The pattern found in Table 4.3 confirmed the findings of Table 4.2, that is, compared with male counterparts, women were more likely to aggregate in the lower-layer of three large social classes (the service class, intermediate class and working class).

Class VIII: currently not in the labour force or never worked

Respondents who were not in the labour force at the time of the interview or never had any paid job are rarely assigned a position in popular social class schemes (e.g. The Registrar General's Social Class Schema, Socio-economic Groups, Goldthorpe's class schema and Wright's class schema). One of the advantages of the NS-SEC is that it includes people who have been ignored or have not been examined systematically in class analysis studies. It is necessary to explore the characteristics of people in this group to prepare for the analyses in the following chapters.

Table 4.4 shows the average ages of all men and women in eight social classes, and separately for those married or cohabiting. The average age of people who were not in the labour force at the time of the interview (Class VIII) was much higher than people in any other social classes (57.8 for men and 57.7 for women). The average age of people in Class VIII who were married or cohabiting was even higher (67 for men and 61.6 for women). It may be caused by the large number of retired people in this group. Moreover, the average ages of married and cohabiting people were all higher than the general population in each social class. It suggests that people who were single tended to be younger than those who were married and cohabiting in this sample.

In contrast, the average ages of men in semi-routine occupations (Class VI) and intermediate occupations (Class III) were the lowest (39.5 and 40.1). The average ages of women in the

Table 4.4 The mean ages of men and women in eight social classes, 2008

	All		Married and cohabiting	
	Men	Women	Men	Women
I HMAP	43.4	40.5	45.0	42.5
II LMAP	42.9	41.2	44.5	44.4
III INT	40.1	41.1	43.9	46.2
IV SEOA	46.3	47.4	47.6	49.2
V LST	40.8	43.3	44.6	47.7
VI SROU	39.5	41.8	46.0	48.1
VII ROU	42.7	42.3	47.9	48.0
VIII CNLF	57.8	57.7	67.0	61.6
Weighted N	6962.1	7942.4	4488.7	4501.4

Note:

i The most-recent-job version is in Note [6].

Source: BHPS, 2008

service class (Classes I and II) and intermediate occupations (Class III) were the lowest (40.5, 41.2 and 41.1). The youngest group of men who were married or cohabiting was in intermediate occupations (Class III) (43.9), and the youngest group of married and cohabiting women was in higher managerial, administrative and professional occupations (Class I) (42.5). These occupations may be popular start points of young men and women's career, and may also reflect exit from different occupations over time, particularly among women.

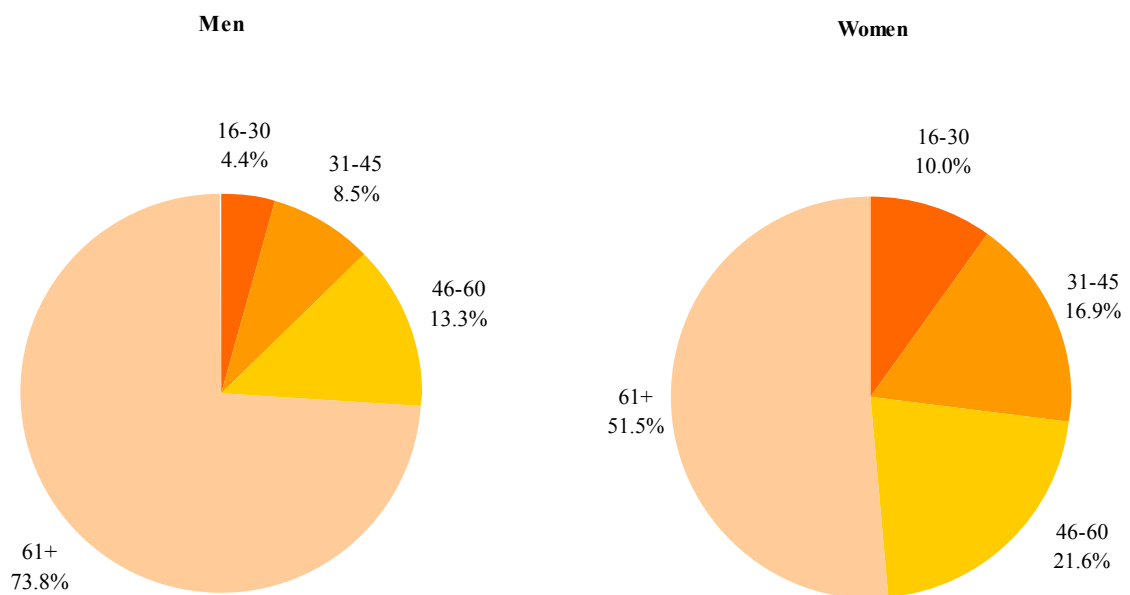
The average ages of people in the first three classes suggest that as the ages increase, men tended to climb up the class ladder while women tended to climb down it. The small employers and own account workers were, on average, the oldest compared with other people in the labour force (46.3 for men and 47.4 for women).

If the most-recent-job NS-SEC was used to measure social class, the average age of people in Class VIII (who had never worked) was the lowest (19 for men and 28.5 for women). The average ages of married and cohabiting people in Class VIII became similar to the average ages of people in the other classes. It suggests that the age of people who had never done any paid work was relatively young. As age increases, people became more likely to experience paid work. Married and cohabiting people who had never done any paid work may be homemakers or have a long-term illness. They tended to be older than people who were single.

Figure 4.7 divides adult respondents into four age groups. In the UK, before 2010, state pension could be obtained by men who reach age 65 and women who reach age 60. This thesis separates respondents aged 61 and above to cover the retired. In BHPS wave 18, the age range of 'retired' respondents is from 44 to 101. The average (mean) age is 72.78. Therefore, the age group 61 and above contains the majority of retired respondents. The rest of the adult respondents were, then, divided into three age groups. Each covers 15 years. The youngest one (age 16 to 30) mainly consists of respondents who have just entered the labour force or are at the beginning of their career. The second one (age 31 to 45) mainly contains respondents who are in the middle period of their career. The third one (age 46 to 60) mainly consists of respondents who are approaching the end of their career.

Figure 4.7 reveals the proportions of married and cohabiting men and women in Class VIII

Figure 4.7 The age distribution of married and cohabiting men and women in Class VIII, 2008



Note:

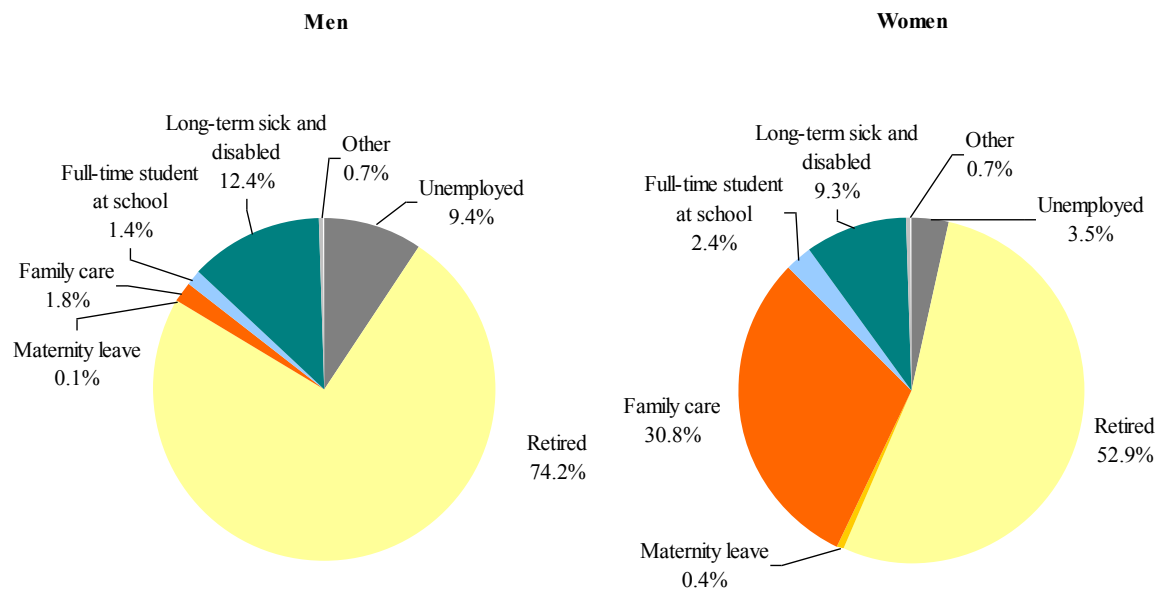
i The unweighted total number of married and cohabiting men in Class VIII is 1178; The unweighted total number of married and cohabiting women in Class VIII is 1613.

ii The most-recent-job version is in Note [7].

Source: BHPS, 2008

in different age groups. The overwhelming majority of the people who were not in the labour force at the time of the interview were aged 61 or older (73.8 per cent men and 51.5 per cent women). The younger the age group, the smaller proportion of married and cohabiting men and women it contains. If the most-recent-job NS-SEC was used to measure social class, the married and cohabiting men and women in Class VIII (never worked) were evenly distributed in four age groups. The largest group of the four was people aged between 16 and 30 (36.4 per cent men and 34 per cent women). It is notable that the total number of married and cohabiting people who had never done any paid work was very small (11 men and 53 women).

Figure 4.8 The employment status of married and cohabiting men and women in Class VIII, 2008



Note:

i The unweighted total number of married and cohabiting men in Class VIII is 1178; The unweighted total number of married and cohabiting women in Class VIII is 1613.

ii The most-recent-job version is in Note [8].

Source: BHPS, 2008

Figure 4.8 shows the distribution of the employment status of married and cohabiting people in Class VIII. The overwhelmingly majority of them were retired. It explains why the average age of these people was the highest compared with other classes in Table 4.4. The second and third largest groups of married and cohabiting men in Class VIII were those who had long-term illness or were disabled (12.4 per cent) and the unemployed (9.4 per cent). Very few of them were caring for the family, in full-time education or on maternity leave. In contrast, nearly one third of women in Class VIII were caring for their family (30.8 per cent),

and about one in ten of them had a long-term illness or were disabled (9.3 per cent). If the most-recent-job NS-SEC was used to measure social class, the top three reasons for keeping men away from the labour force were unemployment, disabled and full-time education. The top three reasons for women were family care, disabled and retirement.

To sum up, married and cohabiting people who were not in the labour force at the time of the interview (Class VIII defined by current-job NS-SEC) were mainly aged 61 or above. The majority of them were retired, disabled, unemployed or involved in family care. Those who were married or cohabiting and had never done any paid work (Class VIII defined by most-recent-job NS-SEC) were mainly aged between 16 and 45. The men tended to be unemployed or disabled. The women tended to be caring for the family or disabled.

4.3.3 Measuring family class compositions

In the last section, I explained the methods of measuring the social classes of individuals, and examined the distributions of the social class. In this section, the methods of measuring cross-class families will be introduced. It will be followed by some preliminary analyses on cross-class families.

Methods

In the literature, the extent of the class difference between two partners was questioned (e.g.

Goldthorpe, 1983). The eightfold NS-SEC maximised the between-group difference and minimised the within-group differences, and the classification was based on a firm theoretical background. Hence, it is plausible and applicable to regard families across any class boundary of the eightfold NS-SEC as ‘cross-class families’, and families with couples in the same class category as ‘class-homogenous families’.

Since the threefold NS-SEC which consists of the service class, intermediate class and working class were more acceptable and widely used, families across any boundary of the threefold NS-SEC are marked in accordance with Graetz’s model (1991). Figure 4.7 shows the model of family class compositions. Families which do not cross any boundary of the threefold NS-SEC but do cross one or more boundaries of the eightfold NS-SEC are called ‘class-adjacent families (CAFs)’. In this research, it is different from Graetz’s model that these families will be regarded as cross-class families with the lowest degree of class heterogeneity. Families that cross one boundary of the threefold NS-SEC are called ‘class-mixed families (CMFs)’. These families are cross-class families with moderate class heterogeneity. Families which cross two boundaries of the threefold NS-SEC are called ‘class-opposing families (COFs)’. These families are cross-class families with the highest degree of class heterogeneity. The third type of cross-class families has been recognised by many cross-class-family researchers (e.g. Marshall et al., [1988] 1993; Payne and Abbott, 1990).

Figure 4.9 The matrix of family class composition

		Women's class							
Men's class		I HMA P	II LMA P	III IN T	IV SEO A	V LS T	VI SRO U	VII RO U	VIII CNLF/N W
	I HMAP	H ⁱ	A	M	M	O	O	O	O
	II LMAP	A	H	M	M	O	O	O	O
	III INT	M	M	H	A	M	M	M	M
	IV SEOA	M	M	A	H	M	M	M	M
	V LST	O	O	M	M	H	A	A	A
	VI SROU	O	O	M	M	A	H	A	A
	VII ROU	O	O	M	M	A	A	H	A
	VIII CNLF/N W	O	O	M	M	A	A	A	H

Note:

i Degree of heterogeneity:

H = Class-homogeneous Families;

A = Class-adjacent Families;

M = Class-mixed Families;

O = Class-opposing Families.

Another classification divides cross-class families into male-class-predominant families (MCPFs) and female-class-predominant families (FCPFs). The former refers to families where the male partner's class position is higher than the female partner's. The latter refers to families where the female partner occupies a higher class position than the male partner. Figure 4.9 illustrates that class-homogenous families are located on the diagonal. Female-class-predominant families could be found in the cells below the diagonal, and male-class-predominant families could be found in the cells above the diagonal.

In McRae's work on cross-class families, she did not include male-class-predominant

families in her definition of ‘genuine cross-class families’ (1986, p.12). These types of families were considered as evidently class homogenous (1983, p. 479). However, Carling challenged whether these families should be excluded (1991, p.285). This thesis does not exclude male-class-predominant families unless there is any evidence for it. These families are consistent with the traditional gender roles that men are more committed to participating in the labour force than women. Thus, Graetz regarded them as ‘traditional’ cross-class families (1991, p.112). Since these families do cross boundary(/ies) of the eightfold NS-SEC, it is reasonable to regard these families as cross-class families and examine how different the two partners are.

The female-class-predominant families are considered as ‘non-traditional cross-class families’ in Graetz’s research (1991, p.112). It attracted most of the attention of cross-class-family researchers and critics. Hence, it is also one of the focuses of this thesis. Coontz challenged if so-called ‘traditional’ families existed (2005). She found that in the marriage history, dual-earner families existed for a long time. Therefore, this research divides cross-class families into male-class-predominant and female-class-predominant ones, rather than ‘traditional’ and ‘non-traditional’ ones.

The distribution of cross-class families

Table 4.5 shows different types of family class composition of married and cohabiting

couples in 2008. In Table 4.3, it shows that economically active women who were married or cohabiting were most likely to cluster in Classes II, III and VI. In this table, as expected, men in Classes II to VIII were most likely to have an economically active female partner in Classes II, III and VI. Men in Class IV (small employers and own account workers) and working class had slightly higher opportunities to get a working class female partner than their counterparts in the service class (Classes I and II) and intermediate occupations (Class III). Men in Class I had a relatively higher chance to get a female partner also in Class I than men in other classes.

In Table 4.3, economically active men who were married or cohabiting were most likely to cluster in Classes II, I and IV. As expected, women in the service class were most likely to have a male partner in these three classes. However, women in the intermediate occupations (Class III) had a slightly higher chance of having a male partner in lower supervisory and technical occupations (Class V). Women who were small employers or own account workers (Class IV) were the most likely to have a same class male partner. It might be due to the feature of their jobs. Women in the working class had a relatively higher chance to get a working class male partner. The only exception was women who were not working at the time of the interview (Class VIII). They were most likely to have a male partner in the service class (Classes I and II) and Class IV (small employers and own account workers). Families with men in these classes may be more likely to afford a female homemaker.

Table 4.5 The family class matrix of married and cohabiting couples, 2008, total percentages (Weighted N=4458.6)

		Women's class							
Men's class	%	I HMAP	II LMAP	III INT	IV SEOA	V LST	VI SROU	VII ROU	VIII CNLF
	I HMAP	1.7	4.3	1.7	0.5	0.2	1.1	0.2	2.6
	II LMAP	1.5	6.0	3.2	0.5	0.3	2.1	0.8	3.0
	III INT	0.1	1.4	1.0	0.2	0.1	0.6	0.2	1.1
	IV SEOA	0.6	2.1	1.3	1.1	0.2	1.4	0.5	2.8
	V LST	0.3	1.5	1.8	0.3	0.4	1.7	0.6	2.0
	VI SROU	0.1	1.3	1.0	0.2	0.4	1.4	0.3	1.5
	VII ROU	0.2	1.4	1.6	0.3	0.5	1.7	0.9	2.1
	VIII CNLF	0.2	1.7	1.2	0.4	0.3	1.6	0.7	26.0

Note:

i The most-recent-job version is in Note [9].

Source: BHPS, 2008

Table 4.6 summarizes the distribution of family class compositions in Table 4.5. It is notable that the majority of married and cohabiting families were cross-class families (61.5% when the current-job NS-SEC was used, and 76.6% when the most-recent-job NS-SEC was used). Nearly two in ten families were class-opposing families where one partner was in the service class and the other was in the working class.

About one in four families were female-class-predominant families, also known as 'non-traditional families'. Moreover, about one in four female-class-predominant families was class-opposing families which consisted of a service class woman and a working class

Table 4.6 The distribution of different types of family class composition, 2008, cell percentages

CHF ^s ⁱ	38.5	I+II ⁱⁱ	7.7		
		III+IV ⁱⁱ	2.1		
		V-VIII ⁱⁱ	28.7		
CCFs ⁱ	61.5	MCPFs ⁱ	35.8	A ⁱ	12.7
				M ⁱ	12.8
				O ⁱ	10.3
		FCPFs ⁱ	25.7	A	8.0
				M	11.0
				O	6.7
Total %	100.0	100.0			
Weighted N	4458.6	4458.6			

Note:

i Family class compositions:

CHF^s = Class-homogenous families;

CCF^s = Cross-class families;

MCPF^s = Male-class-predominant families;

FCPF^s = Female-class-predominant families;

A = Class-adjacent families;

M = Class-mixed families;

O = Class-opposing families.

ii I & II: Managerial and professional occupations, III & IV: Intermediate occupations, V-VIII: Routine and manual occupations.

iii The most-recent-job version is in Note [10].

Source: BHPS, 2008

man (6.7% of all families). These families are the focus of McRae's research (1986). They were also the type of cross-class families rarely attacked by the critics (Goldthorpe, 1983).

About two in five families were male-class-predominant families, and about three in ten male-class-predominant families were class-opposing families (10.3% of all families). These cross-class families were ignored by McRae (1986), and miss-located by Goldthorpe as class-homogenous ones (1983).

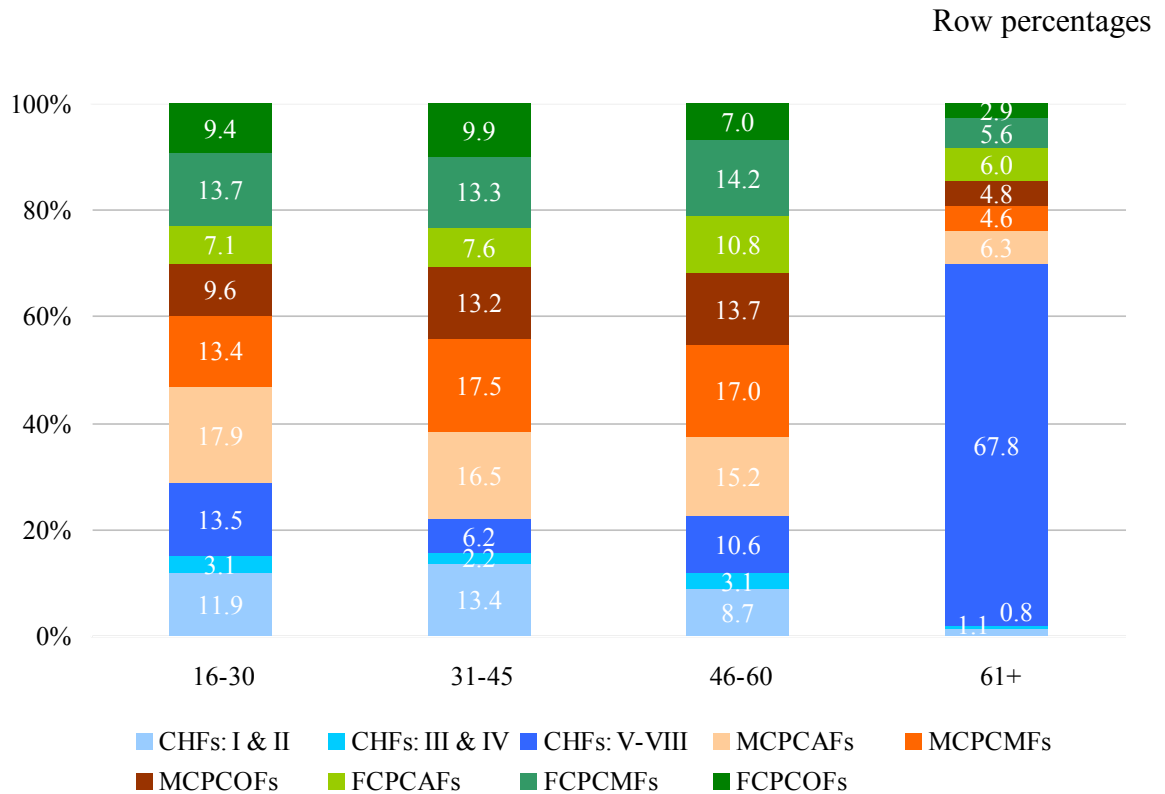
In class-homogenous families, the majority were the working class families (28.7% of all families). The intermediate class families occupied the smallest proportion (2.1% of all families). If the most-recent-job version was used, the largest proportion of class-homogenous families was the service class families (12.8% of all families). It is probably that the most-recent-job assigned social class positions to the retired who had a relatively longer employment history and were more likely to reach the top layer of social stratification.

The distribution of cross-class families in different age groups

Figure 4.10 shows the distributions of different types of families by the age groups of the male partner. The three bluish categories are class-homogenous families, the three reddish categories are male-class-predominant families, and the three greenish categories are female-class-predominant families. Each bar represents an age group.

The distributions of families of the three youngest age groups were quite similar. The proportion of same-class families was about 22 to 29 per cent. Approximately 41 to 47 per cent of families were male-class-predominant, and approximately 30 to 32 per cent were female-class-predominant. Similar to Table 4.6, the largest group of cross-class families was class-mixed families (27 to 31 per cent), and the smallest group was class-opposing families (19 to 32 per cent).

Figure 4.10 Family class composition distributions in four age groups of the male partner, 2008



Note:

i Family class compositions:

CHFs: I & II: Class-homogenous families formed of partners both in service class;

CHFs: III & IV: Class-homogenous families formed of partners both in intermediate class;

CHFs: V-VIII: Class-homogenous families formed of partners both in working class;

MPCAFs: Male-class-predominant class-adjacent families;

MPCMFs: Male-class-predominant class-mixed families;

MPCOFs: Male-class-predominant class-opposing families;

FCPCAFs: Female-class-predominant class-adjacent families;

FCPCMFs: Female-class-predominant class-mixed families;

FCPCOFs: Female-class-predominant class-opposing families.

iii The most-recent-job version is in Note [11].

Source: BHPS, 2008

Families with a male partner aged 61 or above had a different pattern: 67.8 per cent of those were working class class-homogenous families. It probably contains a large number of couples who were both retired. Only 30.2 per cent of those families were cross-class ones, 15.7 per cent were male-class-predominant and 14.5 per cent were female-class-predominant. In cross-class families which have a male partner aged 61 or over, most were class-adjacent families. Namely, the occupational classes of the two partners were different, but the difference was small compared with the other types of cross-class families.

Generally speaking, there were more male-class-predominant families than female-class-predominant families in each age group (consistent with Table 4.6). The difference between the proportions of these two types of families in each age group was not large. In the youngest three age groups, most families were cross-class families (71 to 78 per cent), while in the oldest age group, most families were class-homogenous (70 per cent).

If the most-recent-job NS-SEC was used to measure family class composition, the distributions of different types of families are not that different among the four age groups (Note 11). About 22 to 28 per cent families were class-homogeneous families, and about 72 to 78 per cent were cross-class families. In the youngest age group, the proportion of female-class-predominant families was slightly larger than that of male-class-predominant ones. In other three age groups, the majority of cross-class families were male-class-predominant families.

4.4 Summary

In this chapter, I conceptualised cross-class families by defining ‘cross-class’ and ‘families’. After reviewing the definitions used in the literature, the NS-SEC was selected to define ‘cross-class’. ‘Families’ in this research mainly refer to married and cohabiting heterosexual couples. ‘Cross-class families’ were then defined as families containing a married and cohabiting heterosexual couple and their dependent children if there were any.

In the second part, I discussed the issue about the unit of analysis. My view was that both individuals and families could be the unit of social class. Then the methods of measuring the social classes of individuals and cross-class families were introduced. The former was measured through mainly the eightfold and threefold NS-SEC. The latter was measured through a cross-classification of couples’ social class (i.e. the matrix of family class compositions).

I also did some descriptive analyses of the social classes of individuals and the class compositions of families. It revealed that men tend to dominate the higher level of the three large social classes (i.e. the service class, intermediate class and working class). Women tended to dominate the lower-level ones. The average ages of married and cohabiting men and women in Class VIII were higher than other classes. Most of them were aged 61 or above. They were very likely to be retired, disabled, unemployed or family care makers. If the most-recent-job NS-SEC was used, the average ages of married and cohabiting men and

women in Class VIII were similar to the other classes. Most of them were aged 16 to 45. The male tended to be unemployed or disabled. The female tended to be family carer or disabled.

Married or cohabiting people tend to have a partner more or less different in social class. Although the proportion of cross-class families in 2008 was overwhelmingly larger than class-homogenous ones, the proportion of class-opposing ones was relatively small. This is true in families with a male partner aged below 61. However, the overwhelming majority of families which have a male partner aged 61 or above were class-homogenous.

As expected, there were more male-class-predominant families than female-class-predominant families. This is the same in four age groups except families with a male partner aged below 31 and the class was measured through the most-recent-job NS-SEC. In other words, if the social classes of couples were different, it was more likely that the male partner's class position was higher than the female partner's.

In addition, cross-class families were least likely to be class-opposing ones compared with the other two types of cross-class families. However, about 1.7 in ten families were class-opposing families. This type of family should not be ignored in the analysis of cross-class families and class analysis studies.

In the next chapter, I will conceptualise social capital and introduce the methods of

measuring social capital at the individual level. The three social capital factors will be generated and some basic characteristics of them will be examined.

CHAPTER FIVE

CONCEPTUALISING AND MEASURING SOCIAL CAPITAL

5.1 Introduction

In the last chapter, I explored patterns of cross-class families and the chances of being in a cross-class family. In this chapter, I will conceptualise another key notion of this thesis, social capital. It will start with a review of the definitions used in the literature on social capital. The work of the four most influential social capital theorists will be revisited. Based on that, I will introduce the definition and model of social capital for this research. The key components of social capital will be explained one by one. In the second part of the chapter, I will introduce the methods of measuring social capital. After that, I will demonstrate how to generate three social capital variables using the BHPS. Finally, I will do a descriptive analysis of the three social capital variables.

5.2 Conceptualising social capital

Over the last two decades, there had been a dramatic increase in the number of social capital studies. Various definitions emerged. Some definitions focused on social networks, some on their function, and others on the resources embedded in them. Due to the lack of a consensus,

the studies of social capital were accused of ambiguity and abuse in defining social capital (Portes, 1998).

Before defining social capital for this research, I will review the definitions in the studies of the four key social capital theorists, who were most widely accepted and influential. I will carefully select the most appropriate definition as the basis of the social capital concept for this research.

5.2.1 Literature review

Pierre Bourdieu

One of the pioneer researchers of social capital is Pierre Bourdieu, a French sociologist. In his study about cultural capital in 1979, ‘social capital’ was first mentioned. In his later work, he defined social capital alongside many other kinds of capital, such as cultural capital, economic capital, and symbolic capital (1983). Social capital was not the focus of his research. In order to be consistent with other types of capitals, resources embedded in social networks were defined as ‘social capital’.

He argued that social capital referred to ‘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’ (1983, p.248). This definition pointed

out that the resources of social network were the key components of social capital. It is also the core of many other influential definitions of social capital (e.g. Putnam's and Lin's).

His definition also emphasised 'mutual' recognition rather than unidirectional relationships. Resources in unidirectional relationships were much more difficult to be mobilised by the owner than in mutually recognised relationships. As a result, Foley and Edwards' model of social capital incorporated the 'accessibility' of the relationship (1999). It is a key indicator of the social capital definition for this research.

Li criticised Bourdieu's definition as 'comprehensive in coverage but weak in feasibility', especially for large-scale quantitative studies (2010, p.175). In other words, some components of Bourdieu's definition are not described clearly, thus, in practice, they are hard to measure. For example, which are 'actual or potential resources', and how can we identify 'more or less institutionalised relationships'? The boundaries of the definition are blurred. Since this research needs to clearly define social capital and measure it through a large-scale dataset, his definition is not immediately appropriate for this research.

Robert Putnam

Another important social capital theorist is Robert Putnam, an American political scientist. He popularised the idea of social capital in the US and then around the world. His early work

about civic participation targeted the Italian local government. He claimed that social capital was ‘features of social organisation, such as trust, norms and networks, that can improve the efficiency of society by facilitating coordinated actions’ (1993, p.167). In his later studies, the focus of the definition was changed to ‘features of social life’ (Putnam, 1996, p.56) and ‘connections among individuals’ (Putnam, 2000, p.19). For example, in his famous book, *Bowling Alone*, social capital was defined as ‘connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them’ (Putnam, 2000, p.19).

Compared with Bourdieu’s definition, Putnam’s definition has fewer ambiguities. This definition has been widely used in sociological studies, even studies related to social class (e.g. Li et al., 2005). In addition, Putnam gave many examples of how to apply the definition in large-scale data analysis. The definition for this research will adopt the applicable aspects of Putnam’s latest definition. For example, the social networks are measured through the number of closest friends, and the number of organisations engaged in. The norms of reciprocity are measured through the level of help which one expects to receive from the contacts.

Nevertheless, Putnam’s definition was invented to explain issues of democracy and governance, and to measure collective goods (Li et al., 2005, p.110). In research on the family and social class, the definition needs some modifications. For example, this research

will measure social capital at the individual level, which describes the social advantages and disadvantages of individuals. Consequently, trustworthiness is not measured through general trust in strangers or specific institutions. Instead it is measured through interpersonal trust, such as the closeness of relationships, and the level of help one could obtain from the contact (van Oorschot and Arts, 2005, p.11, Paxton, 1999, p.98).

James Coleman

James Coleman, an American sociologist, is also one of the most famous social capital researchers. His definition of social capital followed the rational choice theory and was invented in the context of education in America. It focused on ‘relationships between adults and children’ only. He defined social capital as ‘the norms, the social networks, and the relationships between adults and children that are of value for the child’s growing up’ (Coleman, 1990, p.334). Similar to Bourdieu, Coleman also emphasized the ‘social network’ in conceptualising social capital. Furthermore, he gave a clearer description of ‘relationships’ than Bourdieu. He incorporated ‘(social) norms’ in the definition, although he believed that it was ‘powerful, but sometimes fragile’ (Coleman, 1990, p.306-313).

Tilly criticised Coleman’s definition, because it did not consider ‘interactions among persons’ (1998, p.29). He pointed out that although Coleman recognized the important influences on actors by ‘agents, monitors, and authorities’ in theory, they are not included in

the measurement model of social capital. In addition, Coleman stated that social capital

‘... is defined by its function. It is not a single entity, but a variety of different entities, having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure’ (1990, p.302).

This functionalist view has been criticised. Different things may have similar functions. For example, cultural capital could also facilitate the actions of individuals, and reflect the social positions of them. On the other hand, Li argued that it was difficult to operationalise Coleman’s definition. For instance, it is hard to identify what relationships and interactions facilitate the improvement of an individual’s education attainment (Li, 2010, p.175). Consequently, the definition for this research only adopts the applicable elements of Coleman’s definition, such as ‘norms’ and ‘social networks’.

Nan Lin

Lin’s definition is the most suitable one for this research, since it emphasised social inequalities. He defined social capital as ‘resources embedded in a social structure that are accessed and/or mobilized in purposive actions’ (Lin, 2001, p.29). It is different from the general ‘capital’ defined by Karl Marx. Marx regarded capital as a ‘part of surplus value captured by capitalists or the bourgeoisie, who controlled the means of production, in the circulation of commodities and monies between the production and consumption processes’.

In Lin's definition of social capital, the ideas of 'surplus value' and 'exploitation' disappeared. Instead, he emphasised the inequality of social 'resources'. It was consistent with the premise of cultural capital and human capital that everyone in the society could invest in their own social capital. Thus, he claimed that he was a 'neocapital' theorist (Lin, [2001] 2008, p.4-6).

'Resources' is the key component of his definition. To specify which resources could be considered as social capital, he gave three detailed descriptions. (1) It should be embedded in a social structure; (2) It should be accessible to the owner; (3) It should be mobilizable to the owner. Foley and Edwards' definition also contained these elements (1999, p.167).

It is necessary to differentiate the social networks of individuals according to their structural context. The size of social networks is not sufficient to demonstrate the level of social capital. By measuring the structural level of the contacts, it is possible to distinguish social networks with a similar size but different qualities. Burt's research on 'structural holes' found that the closer to a strategic position, the more individuals could access valuable information, such as job seeking and promotion information (1992). In addition, Foley and Edwards argued that the positions of individuals in their social networks determined the value of resources which those individuals could obtain from the networks (1999, p.165). Consequently, it is important to incorporate the structural level of the contacts in the definition of social capital. Lin measured the structural level of the contacts through position-generated variables, such as

the prestige score of accessed social contacts' occupations, the range of the prestige score of occupations accessed, the highest scored of occupations accessed, and the number of occupations accessed (1999, p.476; [2001] 2005, p.66). The definition of social capital in this research also contains the structural level of contacts.

Not every social contact would offer help, when the owner of social capital needs them. An accessible and mobilizable social contact is more likely to make some contribution. Therefore, the accessibility and mobilisability are crucial to identify valid social resources. In addition, the quality of resources depends on the characteristics of contacts. For example, men were more likely to access better resources than women. White people were more likely to access better resources than an ethnic minority (Lin, 1999). This research adopts the accessibility, mobilisability and the quality of social contacts when defining social capital.

To sum up, Bourdieu's, Coleman's and Putnam's definitions were invented for distinct research interests. Moreover, Bourdieu's and Coleman's definitions were relatively too ambiguous to be applied to a quantitative study. Only Lin's definition emphasises social inequalities, on which the definition of social capital in this research is also intended to focus. Thus the social capital definition for this research is mainly based on Lin's definition. It also adopts ideas of 'resources' and 'accessibility' from Bourdieu's definition, ideas of 'social networks' from Putnam's definition, and ideas of 'norms' from Coleman's definition. The next section will focus on conceptualising social capital for this research.

5.2.2 Defining ‘social capital’

The notion of social capital in this thesis is used to describe social inequalities. More specifically, it emphasises the inequalities which reflect an individual’s social class position or social status, especially those hardly described by an individual’s occupational class. The definition for this research is based on Lin’s definition which serves a similar purpose. Accordingly, social capital refers to job seeking and promotion resources embedded in an individual’s social networks through which the resources can be accessed and mobilised.

The key components of this definition are: (1) ‘an individual’s social networks’ which describe the scope of social contacts containing the resources needed, (2) accessibility and mobilisability which highlight the validity of resources, and (3) ‘job seeking and promotion resources’ which help to maintain or upgrade the socio-economic position. Compared with the definitions of Lin and other key social capital researchers, this one mainly focuses on occupation related social inequalities.

5.3 Measuring social capital

In the last section, I reviewed the definitions of social capital by four key social capital researchers and corresponding critiques. Then social capital was defined on the basis of the literature, but there will be some modifications. In this section, a model of social capital will be constructed according to the definition above and information available in the BHPS.

After that, methods of measuring social capital will be introduced. In the final part of this section, there will be a descriptive analysis of the distribution of three social capital variables.

5.3.1 Model

Figure 5.1 illustrates the model of social capital. It is constructed on the basis of the three components of the definition above. According to the available information in the BHPS, the three components were measured directly or indirectly through several dimensions. (1) The model contains information on three types of social networks. They are relationships with closest friends, neighbours and members of the organisations in which respondents are engaged. (2) The accessibility and mobilisability of the resources were measured in three aspects: the length of relationship with the contacts, the contact frequency, and the level of help respondents expected to get from the contacts. (3) Job seeking and promotion resources were estimated through some characteristics of the contacts, the structural level of the contacts, and if contacts would help with job seeking.

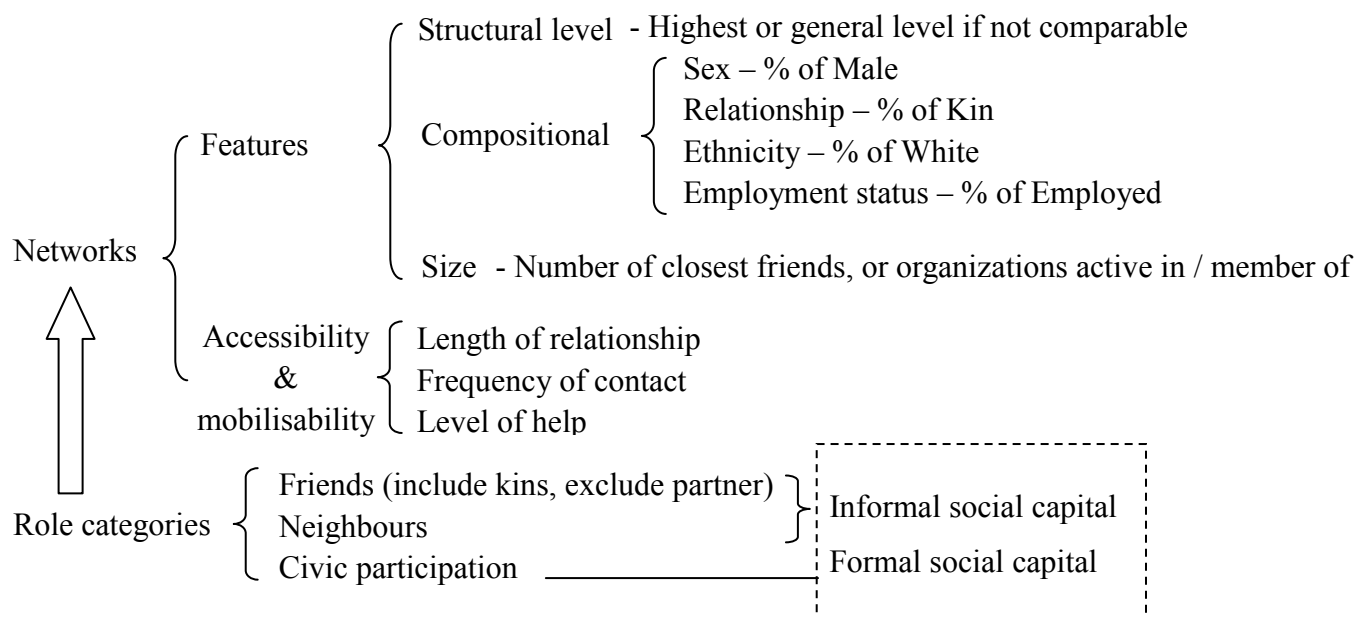
Social networks

Informal and formal social networks

In the literature on social capital, various types of social networks have been examined, such

as local government, communities, and clubs (ONS, 2001, p.18). Conventionally, the formality of social networks was considered as gradual rather than dichotomous (ONS, 2001, p.18). Thus, it is hard to distinguish formal social capital from the informal social capital.

Figure 5.1 The model of social capital



The widely used formal/informal divide derives from Granovetter's idea of bridging and bonding social capital. Bridging social capital refers to 'relations with distant friends, associates and colleagues', which is also known as 'weak ties'. The bonding social capital refers to 'relations amongst relatively homogenous groups such as family members and close friends', which is also known as 'strong ties' (ONS, 2001, p.11). Granovetter pointed out the differences between strong ties and weak ties in respect of social class. He believed that weak ties contributed more to an individual's social mobility than strong ties (Granovetter,

1973). In studies after that, researchers referred to informal social capital as bridging social capital, and formal social capital as bonding social capital with a few modifications. For example, Hall viewed friends and neighbours as informal social relations. Relationships obtained through participating in charity activities were deemed to be formal relations (1999). Spellerberg incorporated families into informal relations, and regarded relationships with government institutes as formal social networks (1997). Li and his colleagues defined informal social relations as close friends, family members in personal networks, and neighbours in situational networks. Formal social networks were defined as relations established in organisations via civic participation (Li et al., 2005).

Researchers found that this divide correlated with social classification. That is to say, the levels of formal and informal social capital varied with respondents' social classes (Li et al., 2005; Pichler and Wallace, 2009). Because this research examines the relationships between social capital and social class, it is necessary to control for this effect. In addition, this divide has been well developed by Li and his colleagues through quantitative studies using large-scale datasets (Li et al., 2003b; Li et al., 2005). Thus, this research adopts this divide.

The relationship with the partner was excluded

The definition of social capital in this research contains resources embedded in intimate relationships. However, the relationship with the partner is excluded from the model. There are two reasons: (1) The way in which partners share valuable resources is different from that

shared with friends or neighbours. It would be problematic to apply the equation for relationships outside the nuclear family to the intimate relationship. (2) The measure of social capital will be used in the within-couple comparison of social capital (Chapter 6). If the relationship with the partner is directly included in the measure of social capital, the level of social capital homogeneity will artificially increase. What is more, the measure of social capital will be used in examining the effect of an individual's social capital on his or her partner's social capital (Chapter 7). If the partner is included in the measure of social capital directly, the effect will also artificially increase. Furthermore, there is little literature of social capital, especially quantitative studies, which included the relationship with the partner in the measure of social capital. Consequently, this study does not include the direct measure of the relationship with the partner. If partners did share social resources with each other, they would probably have shared friends, neighbours, or engaged in the same organisations. The model estimates the influence of the partner indirectly through friendship, neighbourhood and civic participation social networks.

Size

The size of social networks refers to the number of contacts, and may relate to their usefulness. Borgatti, Jones and Everett argued that 'the more people you have relationships with, the greater the chance that one of them has the resource you need' (1998, p.30). This suggests that the number of contacts (i.e. the size of social networks) may positively correlate with the volume of valuable resources one may be able to access. Other researchers

have also claimed that there is a correlation between the network size and the level of social capital (Burt, 1983; Lin, 1999; Pichler and Wallace, 2009).

Lin used to include the size of social networks in the social capital model, but in his work in 2001, it was excluded (1999, p.473; [2001] 2005, p.21). He explained that there was no evidence of a relationship between the size of social networks and the level of social capital. In addition, Smith claimed that a small but powerful social network may contain more valuable information than a large but useless social network (2005).

This research includes the size of social networks in the social capital model, because a recent study, by Pichler and Wallace, found that there was a relationship between social class and the extensivity of social networks (2008). Smith's argument is also reasonable. Therefore, besides the size of social networks, the model of social capital in this research also considers the qualities of social networks in order to estimate the potentially valuable resources embedded in them. The qualities contain the accessibility and the mobilisability of the social network, and the demographic-socio-economic features of the contacts.

Accessibility and mobilisability

Accessibility and mobilisability refer to the level of willingness with which the contacts share their valuable resources. The definitions of social capital by Bourdieu and Lin both

acknowledged the importance of accessibility and mobilisability. Bourdieu emphasised that 'relationships of mutual acquaintance and recognition' tend to have valuable information (1983, p.248). Lin emphasised that valuable resources should be 'accessed and/or mobilized in purposive actions' (Lin, 2001, p.29).

In the BHPS, there is no direct measure about accessibility and mobilisability. However, it is more possible to access and mobilise the valuable resources of the contact, if the relationship is closer. On the other hand, Freeman suggested that the larger the distance of the relationship between the owner of social capital and the contact is, the less likely the social capital owner could obtain information from the contact (1979). Pichler and Wallace adopted 'intensivity' of the relationship as one of the components of social capital at individual level (2009). This research follows this convention and use the closeness of the relationship to estimate accessibility and mobilisability. More specifically, it is measured through the length of relationships, the frequency of contact, and the level of help the contact would offer. It contains three assumptions: (1) The longer the relationship lasts, the closer the relationship is. (2) The more frequently two people contact one another, the closer the relationship is. (3) The higher level of the help the contact would offer, the closer the relationship is.

Job seeking and promotion resources

To estimate if social networks contain job seeking or promotion resources and how valuable

the resources are, the model measures the structural level of the contacts, characteristics of the contacts, and if the contacts would help with job seeking. The third one overlaps with the measure of accessibility and mobilisability, but here it focuses on the help with job seeking rather than general help. If the contacts would offer help with job seeking, the level of social capital increase. To avoid distracting information, the model only retains the level of help with job seeking, and excludes the level of help with other issues (emotional support, financial support and crisis rescue were all surveyed in the BHPS). This component is relatively straightforward. The other two components are discussed as follows.

Structural level

The structural level mainly refers to the social class positions the contacts occupy. The higher class contacts are more likely to possess the information of a higher level job, or more job related information than lower class contacts. Lin's social capital model contains a similar component, known as 'position-generator' ([2001] 2005, p.62). The 'position-generator' includes four indicators: (1) specific class positions accessed, (2) the number of class positions accessed, (3) the highest class position accessed, and (4) the difference between the prestige scores of the highest and the lowest class positions accessed ([2001] 2005, p.66). He found that through the factor analysis, these four indicators tend to generate one factor which has the highest loading on the third indicator. Thus, this thesis measures the structural level of the contacts through the highest class position of the contacts. If there is not enough information to compare the social class positions of all contacts, it could be replaced by a

direct measure of the contact's social class. It estimates the best resources available to the social capital owner.

Compositional quality

The compositional quality refers to the proportion of the advantaged contacts who tend to have better or more job related resources than the disadvantaged contacts. In the study by Borgatti and his colleagues, the compositional quality was defined as the 'high levels of needed characteristics' of social capital owners' direct contacts (1998, p.30). They suggested that the more frequently one contacts people with 'high levels of needed characteristics', the higher level of social capital one has.

Lin claimed that in order to bridge to better resources, people in disadvantaged social groups should try to make contact with people in advantaged social groups. For example, members of deprived families should make contact with non-relatives; ethnic minorities should make contact with the white; women should make contact with men. He found that men tend to have larger social networks and better accessible resources compared with women, since men's social networks contain more non-kin. In addition, Briggs argued that a 'steadily employed adult' may make dramatic changes to the information an adolescent could access (1998, p.177).

In addition, Burt claimed that the degree of the social network heterogeneity positively

related to the level of social capital, if it was not in conflict with the compositional quality (1983). Foley and Edwards made a similar argument that 'more diverse ... network ties increase an individual's likelihood of accessing crucial resources in a given socio-historical context' (1999, p.166). Namely, not only the proportion of the advantaged contacts but also the diversity of the social networks matters. In short, the social networks containing more contacts in advantaged social groups and with the higher level of diversity are more likely to contain more valuable resources.

Summary

To sum up, the three components of the social capital definition will be measured through a number of more specific elements. The social networks will be measured through the size of three types of networks: friendship social networks, neighbourhood social networks, and civic participation social networks. The former two are also known as informal social networks, and the third is known as formal social networks. The relationship with partner will be excluded. The accessibility and mobilisability will be measured through the closeness of relationships, which can be estimated through the length of relationships, the frequency of contacts, and the level of help. The third component, job seeking and promotion resources, will be measured through the structural level of the contacts, the compositional quality of the contacts, and if contacts would offer help with job seeking. The measure of job-seeking help and the measure of the level of help are the same. Consequently, these will be combined into

one when measuring the accessibility and mobilisability of social networks. All the other measures are grouped as features of social networks.

5.3.2 Methods

In the last section, the model of social capital was introduced in order to illustrate the linkage between the measurement and the definition. In this section, methods of measuring social capital used in following sections are explained.

Since some elements in the model (Figure 5.1) were not surveyed directly in the BHPS, they will be estimated through relevant questions. In the first part of the next section, I will introduce all of the indicators selected from the BHPS. The original information of every indicator will be given.

Then, the mean of each indicator will be presented in order to demonstrate what the final social capital measures are derived from. The mean of each indicator will also be presented controlling for sex in order to show how the basic elements of men and women's social capital deviate from the general sample. It gives a hint about how and why men's and women's social capital are different.

The correlation between each indicator and the social class will be shown alongside the

means. Since social class is an ordinal variable (detailed discussion see Section 4.3.2 ‘Methods’), a non-parametric statistic should be used for the correlation test. There are three main non-parametric statistics available, Spearman’s correlation coefficient (r_s), Kendall’s tau (τ), and the biserial and point-biserial correlation coefficient (r_b and r_{pb}). Kendall’s tau (τ) is often used when the sample size is small, and a lot of cases aggregated in the same categories (Field, 2009, p.181). Since the sample contains 3264 married couples and 716 cohabiting couples, the sample size is large enough for Spearman’s correlation coefficient (r_s). Biserial and point-biserial correlation coefficients (r_b and r_{pb}) are used in the cases that one of the two variables in the analysis is dichotomous (Field, 2009, p.182). Since the social class variable and the social capital indicators all have more than two categories, these two statistics are not appropriate for these analyses. Spearman’s correlation coefficient (r_s) is the most appropriate one since it is not only a non-parametric statistic, but also deals with ordinal variables.

A positive r_s value means the two variables are positively correlated. On the contrary, a negative r_s value means the two variables are negatively correlated. The strength of the correlation can be detected directly through the r value. $r_s=1$ means two variables are perfectly positively correlated. $r_s=-1$ means two variables are perfectly negatively correlated. $r_s=0$ means there is no linear relationship between the two variables. Normally, the value of Spearman’s r_s lies between -1 and 1. There are three thresholds: (1) an r_s value around 0.1 or -0.1 means the correlation is small; (2) an r_s value around 0.3 or -0.3 means two variables are

moderately correlated; (3) an r_s value around 0.5 or -0.5 means the correlation is large.

The significance level of the correlation will also be presented. It shows the probability (p) of observing a linear relationship ($r_s > 0$ or $r_s < 0$) between the two variables by chance. Conventionally, $p=0.05$ is the cut-off point. A relationship significant at $p<0.05$ level means that one could be over 95% certain that there is a linear relationship between the two variables. $p<0.01$ implies more confidence (99% certain) in the existence of the relationship. $p<0.1$ is also sometimes seen as acceptable which means the chance of not having a linear relationship is less than 10%.

After the correlation analysis, the factor analysis (more specifically, the principal component analysis) will be used to generate three social capital factors (for friendship social networks, neighbourhood social networks and civic participation social networks) from a list of indicators. Figure 5.1 shows that social capital consists of several dimensions, each dimension contains several elements, and each element will be measured through one or more variables in the BHPS. Hence, the number of social capital indicators will be very large. It would be very difficult to use all of the social capital indicators directly in statistical models in the following chapters. The factor analysis will be used to deal with this problem, since it can generate a small number of latent variables containing all of the important information. It can also help to find out the underlying structure in a list of variables, and use as much relevant information as possible (Field, 2009, p.628).

There are two standard procedures of the factor analysis: (1) the factor extraction, and (2) the factor rotation. Normally, the factor analysis will generate the same number of factors as the number of indicators included. The first procedure is aimed at finding out statistically important ones, which best represent information in all of the indicators (Field, 2009, p.639). This research will force the factor analysis to generate three statistically important factors for social capital embedded in three types of social networks. The second procedure is aimed at finding out the best way to group the indicators, and make sure each factor contains the maximum amount of information in one of the indicator groups (Field, 2009, p.642). Through these two procedures, three social capital factors will be generated, and each represent social capital in one of the social networks.

Finally, this research will examine the normality of three social capital factors through the Kolmogorov-Smirnov test and the Shapiro-Wilk test, and summarise some statistical features of three social capital factors, such as the maximum value, the minimum value and the average value of each factor. The male sample and the female sample will be summarised separately to demonstrate the gender difference.

5.3.3 Indicators of social capital

Although the BHPS is the best national social capital survey, some elements of social capital in Figure 5.1 are not directly addressed. Relevant variables are used to estimate these

elements. One should be aware of the potential inaccuracy caused by the estimation. The coding, original question wording and the detailed calculation processes of each indicator are presented in Appendix 1. It would be better to incorporate direct questions about elements of the social capital model (Figure 5.1) in a nation-wide survey to improve the accuracy of the measure in the future. However, it is outside of the scope of this research.

Table 5.1 displays social capital indicators of three social networks respectively. It examines thirty indicators. The indicators are grouped according to the social networks in the social capital model (Figure 5.1). Table 5.1 shows the distributions of categorical indicators and the means of continuous indicators. The male sample and the female sample are examined separately to demonstrate the gender difference. The results of Spearman's correlation between each indicator and the social class (the current-job version and the most-recent-job version respectively) are also presented.

Social capital embedded in friendship social networks

The social capital obtained from friendship social networks was measured through the structural level of the networks, the compositional quality of the networks, the size of the networks, the length of relationship, the frequency of contact and the level of help contacts might offer. The relationship with the partner was excluded. The reason for doing this has been given in Section 5.3.1. The relationships with parents were included, since Bourdieu

Table 5.1 Social capital indicators, and the Spearman's correlation coefficient for associations between social capital indicators and social class, 2008

Column percentages and means					
Social capital indicators	Column % or mean			Correlation with individual social class	
	Men	Women	All	Current job	Most recent job
FRIENDSHIP SOCIAL NETWORKS					
<i>Structural level</i>					
Highest class in closest friends and parents				0.25 ^{***}	0.36 ^{***}
No close friend/missing	6.9%	4.4%	6.6%		
VIII NW	0.5%	1.5%	1.0%		
VII ROU	7.4%	8.0%	7.7%		
VI SROU	10.1%	14.8%	12.4%		
V LST	11.2%	8.6%	9.8%		
IV SEOA	11.6%	8.5%	9.9%		
III INT	10.9%	17.1%	14.1%		
II LMAP	26.2%	26.2%	25.8%		
I HMAP	15.2%	10.9%	12.6%		
<i>Compositional quality</i>					
% of male friends	68.0	14.3	38.2	0.12 ^{***}	0.02
% of non-relative friends	69.1	64.1	64.4	0.14 ^{***}	0.04 ^{***}
% of white friends	88.2	90.4	86.6	0.04 ^{***}	0.02 [*]
% of employed friends	65.6	57.8	59.5	0.37 ^{***}	0.15 ^{***}
<i>Size</i>					
N. of friends	2.6	2.7	2.6	0.13 ^{***}	0.11 ^{***}
<i>Length of relationship</i>					
Length of relationship with the 1st friend				-0.03 ^{**}	0.05 ^{***}
No closest friend	7.9%	5.1%	9.4%		
Less than 1 year	1.8%	1.6%	1.6%		
1-2 years	4.4%	3.9%	4.0%		
3-10 years	18.1%	17.4%	17.1%		
>=10 years	67.8%	72.0%	67.8%		
Length of relationship with the 2nd friend				0.02 ^{**}	0.09 ^{***}
No closest friend	12.8%	9.6%	13.9%		
Less than 1 year	1.6%	1.8%	1.7%		
1-2 years	4.6%	4.8%	4.6%		

3-10 years	20.8%	20.5%	20.0%		
>=10 years	60.1%	63.3%	59.9%		
Length of relationship with the 3rd friend				0.06***	0.10***
No closest friend	21.0%	17.3%	21.6%		
Less than 1 year	1.6%	2.3%	1.9%		
1-2 years	5.5%	5.0%	5.1%		
3-10 years	20.8%	21.8%	20.6%		
>=10 years	51.2%	53.6%	50.8%		
<hr/>					
<i>Frequency of contact</i>					
Frequency of contact with the 1st friend				-0.00	-0.07***
No closest friend	7.9%	5.1%	9.4%		
Less often	7.1%	3.4%	5.0%		
At least once a month	18.5%	12.7%	14.9%		
At least once a week	37.7%	36.3%	35.8%		
Most days	28.8%	42.4%	34.9%		
Frequency of contact with the 2nd friend				0.05***	-0.04***
No closest friend	12.8%	9.6%	13.9%		
Less often	8.3%	5.5%	6.6%		
At least once a month	20.1%	19.1%	19.0%		
At least once a week	37.4%	36.8%	35.9%		
Most days	21.3%	29.0%	24.6%		
Frequency of contact with the 3rd friend				0.07***	-0.01
No closest friend	21.0%	17.3%	21.6%		
Less often	9.6%	8.0%	8.5%		
At least once a month	21.5%	21.2%	20.7%		
At least once a week	31.0%	32.1%	30.6%		
Most days	16.9%	21.4%	18.7%		
<hr/>					
<i>Level of help</i>					
Help with job seeking				0.20***	0.09***
No help	20.1%	17.6%	18.7%		
Not sure	20.0%	25.1%	22.6%		
Yes	59.9%	57.4%	58.6%		
<hr/>					
NEIGHBOURHOOD SOCIAL NETWORKS					
<i>Structural level</i>					
Graffiti in neighbourhood				0.04***	0.14***
Very common	5.0%	5.9%	5.5%		
Fairly common	14.1%	15.2%	14.7%		
Not very common	49.2%	46.6%	47.8%		

Not at all common	31.7%	32.3%	32.0%		
Teenagers in neighbourhood				-0.02 [*]	0.13 ^{***}
Very common	17.0%	18.4%	17.8%		
Fairly common	33.7%	32.3%	33.0%		
Not very common	33.2%	31.5%	32.3%		
Not at all common	16.1%	17.7%	16.9%		
Drunks/tramps in neighbourhood				0.03 ^{***}	0.15 ^{***}
Very common	3.3%	4.5%	3.9%		
Fairly common	9.8%	10.4%	10.1%		
Not very common	36.6%	33.7%	35.1%		
Not at all common	50.3%	51.5%	50.9%		
Vandalism in neighbourhood				0.05 ^{***}	0.15 ^{***}
Very common	4.2%	5.8%	5.1%		
Fairly common	15.8%	16.0%	15.9%		
Not very common	50.7%	47.9%	49.3%		
Not at all common	29.3%	30.3%	29.8%		
Racial attacks in neighbourhood				0.03 ^{**}	0.14 ^{***}
Very common	0.9%	1.5%	1.2%		
Fairly common	3.5%	4.2%	3.9%		
Not very common	31.7%	32.5%	32.1%		
Not at all common	64.0%	61.8%	62.7%		
Burglar in neighbourhood				0.04 ^{***}	0.07 ^{***}
Very common	1.4%	2.5%	2.0%		
Fairly common	10.8%	14.1%	12.6%		
Not very common	52.6%	53.9%	53.3%		
Not at all common	35.2%	29.5%	32.1%		
Car damage in neighbourhood				0.05 ^{***}	0.10 ^{***}
Very common	3.0%	4.5%	3.8%		
Fairly common	13.7%	16.1%	15.0%		
Not very common	51.6%	49.7%	50.6%		
Not at all common	31.7%	29.7%	30.6%		
Mugging in neighbourhood				0.05 ^{***}	0.15 ^{***}
Very common	1.2%	1.8%	1.5%		
Fairly common	5.7%	6.5%	6.2%		
Not very common	36.3%	36.5%	36.4%		
Not at all common	56.8%	55.2%	55.9%		
<hr/>					
<i>Length of relationship</i>					
Length of residence	15.2	15.9	15.5	-0.20 ^{***}	-0.02

<i>Frequency of contact</i>					
Frequency of contact with neighbours				-0.19 ^{***}	-0.11 ^{***}
Never	2.9%	2.7%	2.8%		
< once a month	7.3%	6.3%	6.8%		
Once/twice a month	16.4%	15.7%	16.0%		
Once/twice a week	39.8%	35.1%	37.3%		
On most days	33.7%	40.2%	37.1%		
CIVIC PARTICIPATION SOCIAL NETWORKS					
<i>Structural level</i>					
The org. with the highest class score of which the respondent was a member	3.3	2.9	3.1	0.25 ^{***}	0.34 ^{***}
The org. with the highest class score in which the respondent was active	2.5	2.3	2.4	0.12 ^{***}	0.19 ^{***}
<i>Size</i>					
N. of org. of which the respondent was a member	1.0	0.9	0.9	0.18 ^{***}	0.30 ^{***}
N. of org. in which the respondent was active	0.7	0.6	0.6	0.06 ^{***}	0.18 ^{***}
<i>Frequency of contact</i>					
Frequency of attending org. meetings				0.16 ^{***}	0.18 ^{***}
Never/almost never	78.6%	68.9%	73.4%		
Once a year/less	4.1%	3.9%	4.0%		
Several times a year	2.6%	4.8%	3.8%		
At least once a month	3.1%	4.4%	3.8%		
At least once a week	11.6%	18.0%	15.0%		
Frequency of doing voluntary work				-0.00	0.15 ^{***}
Never/almost never	78.7%	75.2%	76.8%		
Once a year/less	4.4%	3.9%	4.1%		
Several times a year	5.7%	6.4%	6.1%		
At least once a month	6.5%	8.8%	7.8%		
At least once a week	4.6%	5.7%	5.2%		
Frequency of attending religious activities				-0.03 ^{**}	0.10 ^{***}
Never/practically never	27.0%	21.9%	24.3%		
Only at weddings, funerals etc.	47.4%	42.1%	44.6%		
Less often but at least once	12.8%	17.2%	15.2%		

a year			
Less often but at least once	4.7%	7.7%	6.3%
a month			
Once a week/more	8.1%	11.1%	9.7%

Note:

i * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ii The coding of two social class variables: the higher class the respondent was in, the higher value was assigned to these variables.

Source: BHPS, 1991-2008

argued that ‘social capital is constituted in networks as a resource, which can be accumulated over time and transmitted to the next generation’ (Bourdieu, 1983, cited in Pichler and Wallace, 2009, p.319).

The structural level of the friendship social networks was measured through the highest social class in the first closest friend and parents. It is similar to one of Lin’s social capital indicators, the highest class position accessed ([2001] 2005, p.62). It is notable that in the BHPS about one in five respondents, who gave a valid answer to the question about the relationship with the first closest friend, considered their parents as their first closest friend (ISER, 2011b). The measures of the social class of the best friend and the parents are intertwined. Therefore, compared with the other two types of social networks, it is more plausible to incorporate the relationships with parents into friendship social networks. Table 5.1 shows that the higher social class the respondent was in, the higher the value of this indicator is. This correlation is moderate and significant at $p < 0.001$ level. More specifically, male respondents were more likely to have the best friend or parents in the higher layer of the service class (Class I), the intermediate class (Class IV) and working class (Class V) than

their female counterparts. In contrast, female respondents were more likely to have the best friend and parents in the lower layer of three large social class groups (Classes III, VI to VIII).

The compositional quality of friendship social networks was measured through the proportion of the male, the non-relative, the white and the employed in the three closest friends. Since the survey only asked about the three closest friends, the percentages one could get were around 0%, 33%, 50%, 67% and 100% (due to weighting effects, the results may not be integers). The four indicators significantly correlate to the current-job version of the social class. Most of the correlations were weak, except that between the percentage of employed friends and the current-job version of the social class (moderate correlation). The correlations between the four indicators and the most recent version of the social class were relatively weaker and less significant. Male respondents were more likely to have a higher proportion of male friends, non-relative friends and employed friends than the female, while female respondents were more likely to have a higher proportion of white friends than men. It is notable that the friendship networks were highly gendered.

The problem of these measures is that, on average, respondents gave information of 2.6 closest friends. It may be due to the survey design (see means of the numbers of closest friends in Table 5.1). The overwhelming majority of the indicators of friendship social networks focus on the three closest friends rather than all close and general friends. One

should be aware that the characteristics of the whole friendship social networks may be different from the characteristics of the three closest friends. Unfortunately, BHPS only surveyed the three closest friends. The indicators chosen for the social capital measure in this research are the best available information about respondents' friendship social networks. On the other hand, the benefit of using information of the three closest friends is that close friends are relatively more likely to offer job related information and help than general friends. Thus, indicators of relationships with the three closest friends are important, if not the best, in estimating social capital embedded in friendship social networks.

The length of friendship was measured through the lengths of relationships with the three closest friends. The correlation between these three indicators and the social class are significant but very weak. The majority of friendships lasted for ten years or more. Respondents were more likely to have the first closest friend known for ten years or longer than the second closest friend, and in turn the third. It implies that the first closest friend respondent mentioned may be the best friend, and the second mentioned may be the second best friend. Compared with men, women were more likely to have friends known for more than ten years, especially their first closest friend. Men and women had similar chances of having short-term relationships with three closest friends. It suggests that women were more likely to consider long-term friendships as the closest ones.

The frequencies of contacting friends were measured through the frequencies of contacting

the three closest friends by visiting, writing or telephone. The correlation between these three indicators and social capital is very weak, if there was any. Female respondents were likely to contact their closest friends more frequently than their male counterparts. Male respondents were more likely to contact their closest friends less than once a week. The distributions further suggest that the first closest friends may be the best friend, since the frequency of contact with them was higher than with the second and the third closest friends.

The level of help friends may offer was measured through the question if there was anyone who would help respondents or their family members with job seeking. The correlation between this indicator and the social class is positive and significant. In the case using the current-job version of the social class, the correlation was moderate. It means that the higher class the respondent was in, the more likely he or she could get help from someone with job seeking. Men were more likely to get job-seeking help from their social networks than women. The probability of getting no help at all was also higher for men than for women. Women were more likely to doubt if they could get any job-seeking help. It suggests that women may be less likely to seek help from their social contacts for job seeking compared with their male counterparts.

Social capital embedded in neighbourhood social networks

The social capital obtained from neighbourhood social networks was measured through the

structural level of the networks, the length of relationship, the frequency of contact. The structural level of the neighbourhood social networks was not surveyed in the BHPS. Consequently, it was estimated through variables about the safety level of the neighbourhood. I assume that neighbourhoods with all kinds of safety issues were more likely to be deprived, while neighbourhoods with few safety issues were more likely to be affluent. The safety level of the neighbourhood was measured through the frequencies of eight phenomena: graffiti on walls or buildings, teenagers hanging around in streets, drunks or tramps on the streets, vandalism and deliberate damage to property, racial attacks, burglars, cars broken into or stolen, and people attacked on the streets (Appendix 1). The overwhelming majority of the eight indicators correlated positively and significantly with the respondent's social class. It means that the higher social class the respondent was in, the safer the neighbourhood was. It is consistent with the assumption when selecting these indicators. More specifically, women were more likely to report safety problems in the neighbourhood than their male counterparts.

The length of the relationship with neighbours was estimated through the length of residence in the neighbourhood. Lin found that ethnic minorities rarely have valuable contacts except those who lived there for a long time (2000). Therefore, I assume that the longer respondents had settled in the neighbourhood, the more likely they would obtain valuable resources from their neighbours. Namely, they were more likely to have a high neighbourhood social capital. Table 5.1 shows that the length of residence significantly and negatively correlated with the

current job version of the social class. It means that the higher social class the respondent was in, the shorter period he/she had settled in. The reason may be that the deprived were less likely to afford a change of the residence.

The frequency of contacting neighbours was measured through the frequency of talking to neighbours. The correlation between this indicator and respondents' social class is significant and negative. It means that the higher social class respondents were in, the less frequent they contacted their neighbours. It is consistent with the findings by Li and his colleagues that members of disadvantaged classes were more likely to contact their neighbours than those in advantaged classes (2003). In addition, female respondents were more likely to talk to their neighbours frequently than the male.

Social capital embedded in civic participation social networks

The social capital obtained from civic participation social networks was also measured through the structural level of the networks, the size of the networks, and the frequency of participating in activities of the civic organisations.

The structural level of the civic participation social networks was measured through two indicators, the highest class score of the organisations of which the respondent was a member, and the highest class score of the organisations in which the respondent was active. I assume

that organisations with a large proportion of members in the higher social classes had more valuable job information to circulate than organisations with a small proportion of members in the higher social classes. The organisations consisting of mainly higher social class members were given a higher class score than lower social class members. The detailed calculation procedures for these two indicators are presented in Appendix 1. Table 5.1 shows that these two indicators positively related to the social class. Namely, people in higher social class positions were more likely to engage in organisations consisting of higher class members. It suggests that people in similar social class positions may aggregate to the same civic organisations. Additionally, male respondents were more likely to participate in organisations with higher class score than the female.

The size of the civic participation social networks was measured through the number of organisations of which the respondent was a member and the number of organisations in which the respondent was active. These two indicators positively related to the social class. It means that the higher social class the respondent was in, the more organisations he or she was participating in. However, the correlation is quite weak and the average number of organisations in which respondents were engaging was very small (around one on average). Men tended to participate in more organisations than women.

The frequency of contacting people in civic participation social networks was measured through three variables, the frequency of attending organisation meetings, the frequency of

doing voluntary work, and the frequency of attending religious activities. The respondents in the higher social class tended to attend organisation meetings more frequently, but attend the religious activities less often. It is notable that the majority of respondents had hardly ever attended organisation meetings or done voluntary work, but had attended religious activities on occasions such as weddings and funerals. Female respondents attended civic activities (organisation meetings, voluntary work, and religious activities) more frequently than men.

To sum up, Table 5.1 shows that the overwhelming majority of indicators were significantly correlated to the social class (both the current-job version and the most-recent-job version). It suggests that respondents' social capital obtained through three social networks (friendship social networks, neighbourhood social networks and civic participation social networks) may significantly correlate to their social class. In addition, most of these indicators *positively* correlate with the social class. Thus, the relationship between the social capital of individuals and their social class might be positive. Namely, the higher social class position one was in, the higher level of social capital one might have. According to the r_s value of each indicator, most of the relationships between the social class and social capital indicators are weak. That is to say, the relationship between respondents' social class and their social capital may not be strong. One should be aware that the measure of social capital may be gendered, since the distributions and the means of indicators have many gender discrepancies.

5.3.4 Generating three social capital variables through factor analysis

In the last section, I examined the distributions and means of the social capital indicators, and the relationships between each indicator and the social class. The basic elements of social capital were illuminated. This section will explain how to generate three social capital variables for friendship social networks, neighbourhood social networks and civic participation networks through the factor analysis. The two standard procedures of the factor analysis, the factor extraction and the factor rotation, will be discussed respectively.

All social capital indicators presented in Table 5.1 were entered into the factor analysis model. The score of the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.86. It is greater than 0.5, so that it is a very satisfactory result (Kaiser, 1974, cited in Field, 2009, p.659). It means that the sample size and set of correlations found is acceptable to factor analysis (Hutcheson and Sofronious, 1999, cited in Field, 2009, p.659). Moreover, Bartlett's test of sphericity is significant at the $p < 0.001$ level. It means that the correlations between the indicators are strong enough, and it is appropriate to apply factor analysis (Field, 2009, p.660).

Factor extraction

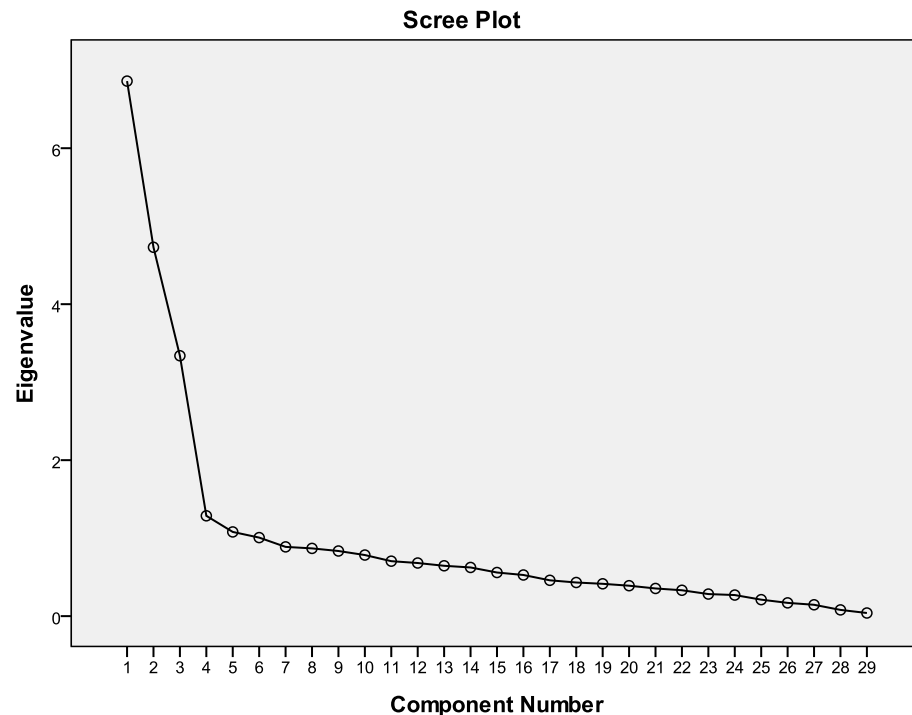
In the factor extraction process, the model was forced to generate three factors for three types of social networks (friendship social networks, neighbourhood social networks, and civic

participation social networks). Normally, the factor analysis generates the same number of factors as the number of the indicators. Researchers have to keep the statistically important ones only. Some researchers apply Kaiser's criterion, to retain factors with the eigenvalue higher than 1 (1960, cited in Field, 2009, p.640). However, in this case, six factors met the requirement. The number of factors is still too large for the analyses in the later chapters. In addition, the average communality after the extraction is 0.52. It suggests that Kaiser's criterion is inappropriate for the factor selection (Field, 2009, p.641).

There is another way of selecting the important factors. Stevens argued that 'with a sample of more than 200 participants, the scree plot provides a fairly reliable criterion for factor selection' (2002, cited in Field, 2009, p.640). Since the sample here contains 7960 individuals (Chapter 3), the scree plot can be used to assist the factor selection. Cattell claimed that 'the cut-off point for selecting factors should be at the point of inflexion of this curve' (1966, cited in Field, 2009, p.639). Factors on the left side of the inflexion point should be kept. Figure 5.2 shows that the fourth circle (i.e. the fourth factor) is the inflexion point. Consequently, the first three factors are the most statistically important ones.

The percentages of the total variance explained by these three factors are 23.7%, 16.3% and 11.5% respectively. These three social capital factors all together count for 51.5% of variance of all indicators. Therefore, the measure of social capital could be represented by these three factors.

Figure 5.2 Scree plot for the factor analysis, 2008



Note:

i According to Table 5.2, the first circle on the left denotes friendship social capital. The second circle denotes neighbourhood social capital. The third circle denotes civic participation social capital.

Source: BHPS, 1991-2008

Factor rotation

The method of rotation is determined by the relationships among the factors. Some researchers claimed that social capital factors were not related, but others claimed that there were weak relationships among social capital factors (van Oorschot and Arts, 2005; Pichler and Wallace, 2009). Since the concept and measure of social capital differs, sometimes greatly, in different research, it is hard to decide which research should be followed.

Theoretically, this research believes that the three social capital factors should, to some extent, correlate with each other in order to depict a single latent structure, the level of job seeking or promotion resources in an individual's social networks. Empirically, the factor analysis shows that the three social capital factors are weakly and positively correlated to one another ($r=0.06$ between friendship social capital and neighbourhood social capital; $r=0.17$ between neighbourhood social capital and civic participation social capital; $r=0.17$ between friendship social capital and civic participation social capital). The three correlations are all significant at the $p<0.001$ level. Thus, the three social capital factors are considered as interrelated in this research, and, accordingly, a direct oblimin rotation algorithm was applied.

Table 5.2 shows the factor loadings for the indicators on the three factors. The content of each factor could be estimated through the indicators loaded highest on the factor. In Table 5.2, the loadings are compared horizontally among three columns. The highest values are marked bold. The pattern shows there is some factorial validity in the structure. The first factor mainly describes social capital in friendship social networks, such as the number of the closest friends, and the proportion of white friends in the closest friends. It is notable that the indicator of the help with job seeking loaded highest on the first factor. In the BHPS, this indicator was surveyed separately from other friendship-related indicators. Respondents were asked if they could get help from people outside the family to find a job for themselves or for their family. The factor loadings suggest that this kind of help may mainly come from their

Table 5.2 Factor loadings for social capital indicators onto three social capital factors, 2008

	Oblique rotated loadings		
	Friendship social capital	Neighbourhood social capital	Civic participation social capital
N. of friends	0.97	-0.03	0.00
% of white friends	0.88	-0.01	-0.04
Length of relationship with the 2 nd friend	0.86	0.01	0.03
Length of relationship with the 1 st friend	0.84	-0.00	-0.00
Length of relationship with the 3 rd friend	0.81	-0.06	-0.06
Frequency of contact with the 2 nd friend	0.80	0.00	0.06
Frequency of contact with the 1 st friend	0.80	-0.08	-0.08
Frequency of contact with the 3 rd friend	0.76	-0.05	-0.03
% of non-relative friends	0.63	0.02	-0.07
% of employed friends	0.62	-0.05	0.01
Highest class in closest friends & parents	0.43	0.14	0.21
% of male friends	0.40	0.01	-0.05
Help with job seeking	0.10	0.03	0.05
Vandalism in neighbourhood	-0.01	0.84	-0.03
Mugging in neighbourhood	-0.02	0.79	-0.06
Car damage in neighbourhood	0.01	0.77	0.01
Drunks/tramps in neighbourhood	0.01	0.75	0.02
Graffiti in neighbourhood	-0.00	0.74	-0.09
Teenagers in neighbourhood	-0.00	0.73	0.02
Racial attacks in neighbourhood	-0.05	0.73	0.01
Burglar in neighbourhood	0.00	0.72	-0.00
N. of org. in which the respondent was active	-0.01	-0.08	0.87
N. of org. of which the respondent was a member	0.02	-0.07	0.86
The org. with the highest class score in which the respondent was active	-0.01	-0.08	0.84
The org. with the highest class score of which the respondent was a member	0.02	-0.05	0.81
Frequency of doing voluntary work	-0.05	-0.01	0.57
Frequency of attending religious activities	-0.14	0.09	0.43
Frequency of attending org. meetings	0.03	-0.03	0.35
Frequency of contact with neighbours	0.03	0.03	0.09
<i>Eigenvalues</i>	6.83	4.67	3.67
<i>Cronbach's α</i>	0.83	0.89	0.74

Note:

- i Extraction method: the principal component analysis.
 - ii Rotation method: the direct oblimin method was used for the oblique rotation.
 - iii Total explained variance: 51%.
 - iv Indicator 'Length of residence' is deleted in order to increase Cronbach's alpha in the reliability test from 0.28 to 0.74.
- Source:* BHPS, 1991-2008

friends.

The second factor mainly describes social capital in neighbourhood social networks, since most indicators of neighbourhood social networks are loaded highest on this factor. However, one of the indicators about the neighbourhood social networks, the frequency of contacting neighbours, is loaded highest on the third factor. Probably the indicators loaded highest on the second factor are highly correlated, since they were all about the neighbourhood safety level. The frequency of talking to neighbours may be more similar to the indicators about the frequency of social activities described by the third factor (e.g. the frequency of attending organisation meetings). In addition, one should be aware that the indicators loaded highest on the second factor are all about the community rather than individuals. Therefore, it is very probable that the level of respondents' neighbourhood social capital was similar to their partners', if couples were living in the same household or neighbourhood. The difference between two partners may reflect different opinions about the neighbourhood safety levels.

The third factor mainly describes social capital in civic participation social networks. Since active members of organisations may meet the other members more frequently than general

members, they may be more likely to form solid relationships with the other members, and more likely to get valuable information from them. Consequently, information of organisations in which respondents were active should be more important to the measure of social capital than organisations which respondents were members of. As expected, the former loaded higher than the latter on the third factor in terms of the size and structural level.

Originally, thirty indicators were all entered into the factor analysis. The indicator about the length of residence was loaded highest on the third factor. Then the reliability of each factor was examined. Kline argued that the acceptable level of Cronbach's alpha is 0.7 and above ([1993] 2000, cited by Field, 2009, p.675). The results of the reliability analyses showed that Cronbach's alpha of the third factor was too low. According to the item-total statistics, the indicator about the length of residence was deleted to improve the reliability of civic participation social capital. Then the factor analysis was rerun with twenty-nine indicators. The loading pattern was similar to the original one and presented in Table 5.2. The reliability analyses for the factor analysis revealed satisfactory results. Cronbach's alpha of three social capital factors are all higher than 0.7 (Table 5.2). Therefore, the three social capital factors generated from twenty-nine indicators through factor analysis are valid and reliable.

5.3.5 The distribution of three social capital variables

Table 5.3 shows the results of the descriptive analyses of three social capital factors for men and women respectively. An individual's social capital value could be positive, negative, or even zero. One should be aware that these values represent a certain proportion of the variance of indicators loaded on the factor. It is the relative level of the social capital compared with other respondents (Field, 2009, p.669). Thus, one should be careful with the interpretation. For example, value 0 does not necessarily mean the respondent did not have any social capital at all, but means the level of social capital of the respondent was lower than those assigned value 1 and higher than -1.

Table 5.3 Descriptive statistics of social capital of men and women, 2008

		Friendship social capital	Neighbourhood social capital	Civic participation social capital
Minimum	Men	-2.43	-3.83	-1.41
	Women	-2.45	-3.80	-1.39
Maximum	Men	1.19	1.49	3.77
	Women	1.13	1.46	4.60
Mean	Men	0.30	0.11	0.08
	Women	0.26	0.67	0.09
Median	Men	0.52	0.19	-0.04
	Women	0.45	0.14	-0.11
N	Men	3980	3980	3980
	Women	3980	3980	3980

Source: BHPS, 1991-2008

The three social capital factors are comparable, since they have the same measurement unit.

It could be added up to get a total social capital score of each respondent (Field, 2009, p.670).

However, in practice, researchers conventionally analysed social capital factors separately and never added these up to obtain a social capital score (e.g. Li et al., 2005; Pichler and Wallace, 2009). The reason may be that three social capital factors represent social capital in three distinctive networks. Sometimes, they have different relationships with demographic-socio-economic factors (Li et al., 2005). It is not recommended to add up the values of the three factors for each respondent.

Table 5.3 shows that the maximum and minimum values of civic participation social capital are higher than friendship social capital, but the mean and median neighbourhood social capital are lower than friendship social capital. Neighbourhood social capital has a wider range of values. The medians of three social capital factors are between -0.04 to 0.52. On average, men tended to have a higher level of median social capital than women. It is consistent with the suspicion mentioned in Section 5.3.3 that the social capital (especially friendship social capital) measure may be gendered. The differences of social capital between men and women will be explored further in Chapter 6.

In addition, according to the Kolmogorov-Smirnov tests and the Shapiro-Wilk tests, the distributions of three social capital factors are not normal distributions, neither in male samples nor in female samples (Note [1]). It is possible to transform them into normal distributions, but this research will not do it. There are three reasons: (1) The BHPS is a dataset collected by the ISER. In the early years, information was collected by hand rather

than by computer. There are a large number of respondents and the sample more or less changed every year. It is very hard to check the original answers to detect mistakes. Although it is possible to consult the Data Archive, it would be very time-consuming.

(2) There are many transformation methods, such as excluding the outliers and calculating the logarithm for each value, but no evidence shows which one is the best solution and the necessity of doing so. Some researchers were concerned that ‘the payoff of normalizing transformations in terms of more valid probability statements (was) low, and they are seldom considered to be worth the effort’ (Glass, Peckham and Sanders, 1972, p.241).

(3) In later chapters, non-parametric tests will be applied which are specifically designed to analyse non-normally distributed variables. The results of non-parametric tests are normally robust to the violation of the normality assumptions (e.g. F statistics in Multivariate analysis of variance (MANOVA)). Some statistics may be affected by the violation of the normality assumption (e.g. the significance level of F statistics in MANOVA). In that case, the results should be interpreted with caution (e.g. F statistics significant at marginal levels in MANOVA may actually not significant). Although the non-parametric tests are more complicated than parametric ones, the benefit is that the original characteristics of the non-normally distributed variables will be retained. For these reasons, the social capital factors will not be transformed to force them into normally distributed ones.

5.4 Summary

This chapter reviewed definitions of social capital by four key social capital researchers. It concluded that Lin's definition is the most appropriate one to adopt. The reason is that Lin's definition serves a similar research interest, and it is relatively more applicable to the analysis of a large-scale dataset compared with Bourdieu's, Coleman's and Putnam's definition. Then social capital was defined as job seeking or promotion resources embedded in an individual's social networks through which the resources could be accessed and mobilised.

Indicators were selected to measure three key components of the definition, social networks, accessibility and mobilisability, and job seeking/promotion resources. The majority of social capital indicators, take each in turn, correlated significantly to the respondent's social class, but relationships were not strong. It implies that the social capital level estimated from these indicators may weakly or moderately correlate with the social class. Furthermore, the measurement of social capital may be gendered since the distributions and the means of indicators have many gender differences.

Factor analysis was applied to reduce the number of social capital variables for the analyses in later chapters. Three social capital factors are generated from twenty-nine indicators, which are friendship social capital, neighbourhood social capital and civic participation social capital. The indicator about the length of residence was excluded to improve the

reliability of civic participation social capital. The pattern of factor loadings and the reliability analyses proved that the three social capital factors are valid and reliable.

The descriptive analyses of the three social capital factors revealed that men tended to have a higher level of social capital than their female counterparts on each of these three dimensions. The social capital values are relative values since they are estimated through a series of variables using the factor analysis. The values of the three social capital factors are comparable but they will not be added up into a single value. The purpose of this is to retain the distinctive features of each type of social networks.

The distributions of three social capital factors are not normal. They will not be transformed into normally distributed variables. Instead, non-parametric tests will be adopted in later chapters to deal with this matter.

The next chapter will start to examine relationships between social capital and social class. The correlations of social capital between two partners will be examined to grasp the within-couple social influence. Social capital of couples in cross-class families will be investigated to find out if the NS-SEC captured social capital inequalities between partners.

CHAPTER SIX

SOCIAL CAPITAL HETEROGENEITY IN CROSS-CLASS FAMILIES

6.1 Introduction

In Chapter 4, various critiques of cross-class families were discussed. The most influential one is that of Goldthorpe who claimed that:

“cross-class’ families may ... be regarded far more as artefacts of an inappropriate mode of categorization than as a quantitatively significant feature of present-day society. Rather than marriage being the source of a new complexity in the class structure, it would seem that class still remains the basis of homogamy’ (Goldthorpe, 1983, p.482).

This implies that partners, irrespective of the possible discrepancy in their occupations or employment status, should be regarded as being in the same social class. However, adherents of the joint classification approach and the individual approach disagree (Heath and Britten, 1984; Stanworth, 1984; McRae, 1986; Marshall et al., [1988] 1993; Leiulfsrud and Woodward, 1987; Baxter, 1988; Graetz, 1991; Wright, 1997, 2004). They recognised the contribution of an individual’s own occupation to his or her social class, and the possibility of differences in social class between the two partners. They believed that it is important to recognise the existence of cross-class families. However, critics pointed out that the literature

on cross-class families mainly focused on proving ‘the employment of married women ‘makes a difference’” (Goldthorpe, 1984, p.491). It rarely shed light on identifying the substantial difference between ‘cross-class’ couples. In this chapter, I will investigate if there was any substantial social difference between ‘cross-class’ partners through examining the social capital heterogeneity in cross-class families.

In the last chapter, I reviewed the definition of social capital in the literature and conceptualised it for this research. Three social capital factors, comprising friendship social capital, neighbourhood social capital and civic participation social capital, were generated from a list of indicators obtained from the BHPS. In this chapter, these three social capital factors will be used to explore social capital heterogeneity.

Social capital heterogeneity refers to the differences in social capital between two partners. Before investigating this matter, it is necessary to examine the relationship between social capital and social class, and gender differences in social capital. The former tests help to estimate differences in social capital among members of different social classes. The latter tests help to estimate differences in social capital between men and women. Together, these help to construct the hypotheses of social capital heterogeneity in cross-class families.

More precisely, two research questions will be examined: (1) Were ‘cross-class’ partners heterogeneous in social capital? (2) Did the social class of individuals, as defined by the

NS-SEC, accurately reflect their social capital inequalities? If ‘cross-class’ partners were found different not only in terms of their occupations but also of their levels of social capital, it would suggest that allocating these partners to the same social class position is problematic.

6.2 Literature review

In this section, I will briefly review the literature about the relationships between social capital and social class, and gender differences in social capital. Then I will focus on reviewing the literature about social capital heterogeneity in cross-class families. Through these literature reviews, the analytical hypotheses in this chapter will be constructed.

6.2.1 Relationships between social capital and social class

In Chapter 5, correlations between social capital indicators and social class showed that most individual social capital indicators significantly and positively correlated with the social class. Thus, it is probable that the three social capital factors will also be significantly and positively correlated with the social class.

In the literature, researchers have found empirical evidence that members of different social classes tended to have different levels and features of social capital (e.g. Li et al., 2005; Pichler and Wallace, 2009). For example, Pichler and Wallace found that in European

countries, there was an association between an individual's social capital (including the extensivity and the intensivity of formal and informal social networks) and his or her social class (containing the professional and managerial, the petty bourgeoisie, the intermediate class, the working class, and people who had never been in paid work), even if gender, age and other social-demographic factors were controlled for.

However, the correlations between the social capital factors and the social class were not all positive. It is notable that these studies applied more or less different methods of measuring social capital and the social class. For example, Li and his colleague's social capital measure emphasised social engagement. Pichler and Wallace's social capital measure focused on the extensivity and the intensivity of the social networks. Both are different from the focus of social capital measure in this research, which include job seeking or promotion related resources in the social networks. The strength of the measure used in this thesis is that it more directly reflects the actual or potential social position one was in (i.e. social inequalities).

Lin, an American sociologist, claimed that the distribution of social capital is uneven across the social class hierarchy. Compared with the privileged social groups, the less advantaged groups had relatively restricted access to valuable resources. He argued that the social networks of the higher class members were smaller, denser and more homogeneous contrasted with the lower class members. Through such 'homophily' social networks,

members of the higher social classes could sustain their social advantages (Lin, 2001, p.96).

Hall had contrary findings based on a fifty-year British dataset. He claimed that the working class tended to have narrower and more homogenous friendship networks, which mainly consisted of relatives, 'friends of friends', or friends known for a long time. In contrast, people in the middle class tended to have relatively more heterogeneous social networks, which includes colleagues, friends from other social circles, or friends met through various activities (Hall, 2002).

Pichler and Wallace found similar results using a European dataset. They claimed that the higher social class one was in, the wider social networks of friends and neighbours one had. In contrast, members of the working class tended to have friends from a smaller social circle (Pichler and Wallace, 2009).

These seemingly contradictory findings each suggested that members of higher social classes tended to have higher levels of social capital than members of lower social classes. Lin's findings meant that people in the higher social classes tended to have friends who were also in privileged social positions. Thus, they had more valuable resources available in their social networks (i.e. a higher level of social capital). Hall and Pichler and Wallace's findings suggested that people in the working class tended to have relatively deprived friends. In contrast, people in the middle class tended to make friends with people from various

backgrounds. They were more likely to recruit people who had valuable social resources into their social networks. Consequently, they were more likely to have higher levels of social capital than people in the working class.

Friendship social capital and social class

Li and his colleagues did a study on social capital in British society. They found that the salariat tended to have the highest level of friendship social capital contrasted with the petty bourgeoisie, the intermediate class and the working class. The results were quite robust when the effects of social factors such as education, income and age were controlled for (Li et al., 2005). It suggests that friendship social capital may positively correlate to the social class.

Pichler and Wallace found that people in the higher social classes were less active in informal social networks (including friend, colleagues and neighbours) than people in the lower social classes, although members of the higher social classes tended to have wider informal social networks. Wide social networks may contain more valuable social resources than narrow ones, while loose relationships may be less likely to be mobilised compared with close ones. In other words, the advantage of people in the higher social classes in terms of social capital could be counterbalanced. Since they did not combine the extensivity and intensivity of social networks into one single measure as was done in this research, it is difficult to estimate the relationship between general informal social capital and social class.

Neighbourhood social capital

A feature of people in the working class was that both their formal and informal social networks relied heavily on the local community (Bulmer, 1986; Allan and Crow, 1993; Allan, 1996; Hall, 2002; Li et al., 2005; Pichler and Wallace, 2009). Wilson found that people living in poor communities tended to restrict their social networks to the deprived locality (1997). On the contrary, Hall found the situational dependence of the middle class members was not as strong as the working class members. If people in the middle class moved geographically, their social trust level did not change significantly. Moreover, neighbourhood social capital of people in the middle class was twice as high as people in the working class (Hall, 2002). It suggests that the neighbourhood social capital of people in the middle class tended to be higher than people in the working class.

Civic participation social capital

In respect of civic participation social capital, Hall found that the middle class were active in various types of voluntary organisations, while the working class disproportionately participated in trades unions and working men's clubs (2002). This argument was supported by Li and his colleagues. It is notable that they used the same dataset as this research, the BHPS, but not the same wave (they used earlier datasets). Thus the question wordings of the indicators of their civic participation social capital were the same as this research. They found that members of different social classes had different civic participation preferences.

People in the service class were less likely to participate in trade unions and working men's clubs which were dominated by the working class, except women in the service class who were members of trades unions (probably in public sector). All the other organisations (except trade unions and working men's clubs) were 'service-class-dominant' (the name of organisations can be found in Appendix 1) (Li et al., 2003a, p.503). It suggests that both members of the working class and the service class tended to participate in the organisations mainly consisting of people in the same social class as themselves. Consequently, the higher class members were more likely to make contact with people who had more valuable resources than the lower class members.

In addition, members of the higher social classes tended to engage more intensively in the activities of civic organisations than members of the lower social classes. The number of organisations they participated in was also larger than the lower social classes (Goldthorpe, [1980] 1987; Hall, 2002; Li et al., 2005; Pichler and Wallace, 2009). It further confirmed that there is an advantage to higher class members in civic participation social capital. Li and his colleagues argued that 'there is increasing class polarization in associational membership in British society' (Li et al., 2003a, p.498). It suggested that the civic participation social capital was positively associated with the social classes of individuals.

Summary

To sum up, people in the higher social classes were likely to have an advantage over people in the lower social classes in terms of social capital. More specifically, the advantage in neighbourhood and civic participation social capital was quite clear, but any advantage in friendship social capital was not so clear.

6.2.2 Differences in social capital between men and women

Social capital heterogeneity is measured through comparing the social capital of the male partner and the female partner. Before comparing the social capital of men and women in intimate relationships, it is necessary to investigate if the social capital levels of men and women in general are different. In addition, this research will investigate the social capital heterogeneity discrepancy among families with different degrees of social class heterogeneity. Thus, it is also important to examine if social capital and the social class of the male sample or the female sample were associated in the same way as that of the overall sample.

Informal social capital (i.e. friendship social capital and neighbourhood social capital)

Researchers have found that men's social networks were more heterogeneous and extensive than women's (Moody, 1983; Campbell and Rosenfeld, 1986; Moore, 1990). Women had

more relatives, neighbours and people in the lower social classes in their social networks, while men had more colleagues and non-relative contacts (Moore, 1990). It seems that men had an advantage over women in informal social capital.

However, it was not always the case in different studies. Moore found that such gender differences diminished once age, family and employment status factors were controlled for (1990). Moreover, women were more actively engaged in their friendship networks and local communities than men (Jamieson, 1998; Li, et al., 2005). Thus, women might have closer relationships with their friends and neighbours, and were more likely to have access to and mobilise resources in their informal social networks. Further, women might have access to other valuable resources via their male family members (Lin, 2000). This may, to some extent, counterbalance the disadvantage of their relatively homogenous social networks.

Formal social capital (i.e. civic participation social capital)

Li and his colleagues found that men were more likely to participate in civic organisations than women in the same social classes (2003a). However, they found contrary results in their later study, that women were more likely to participate in civic organisations than men, but the gender difference was not very large (Li et al., 2005). The contradiction might be caused by using different datasets or applying different methods of measuring social capital. The former study measured civic participation social capital through the number of 'labour'

and/or 'civic' organisations of which the respondent was a member. The latter study measured civic participation social capital through the membership of eight types of civic organisations. The method used in the former study is similar to one of the indicators of social capital in this research, which is the number of organisations of which the respondent was a member (Appendix 1). Thus, the findings of the former study may be closer to this research. One should be aware that this research considered the number of organisations in which the respondent was active, and other characteristics of the civic participation social networks (Chapter 5). Therefore, the validity of the measure in this research is relatively stronger.

McPherson and Smith-Lovin found that men's formal social networks tended to have more 'potential contacts and other resources' than women. It means that men's social networks of civic participation contained more useful information about 'possible jobs, business opportunities, and chances for professional achievement' compared with their female counterparts. On the contrary, women's formal social networks were more likely to contain 'information about the domestic realm' (McPherson and Smith-Lovin, 1982, cited in Lin, 2000, p.787). Moreover, the organisations which men engaged in tended to have more male members (Beggs and Hurlbert, 1997). It is difficult for a woman to enter into the male-dominated social networks (Brass, 1985). These results suggested that the quality of women's formal social networks tended to be lower than their male counterparts. Therefore, women's formal social capital might be lower than men.

Summary

Although it is difficult to summarise the findings of social capital measured through different methods and using different datasets, it is quite clear that men tended to have more heterogeneous social networks with more job-related social resources. In addition, the associations between social capital and the social class were unlikely to be affected by the gender factor (Li, et al., 2003a; Li, et al., 2005).

6.2.3 Social capital heterogeneity in cross-class families

At the beginning of this chapter, I gave a definition of social capital heterogeneity, which is the difference in social capital between two partners. There is, it seems, no literature on social capital heterogeneity, let alone social capital heterogeneity in cross-class families. This research will fill this literature gap.

An assumption could be made on the basis of the existing literature. Since the measure of social capital in this research focuses on reflecting the level of potential job-seeking and promotion resources in their social networks, the three social capital factors, to some extent, reflect the actual or potential social position of the individual. If there were no ‘cross-class families’ and all families were homogenous as suggested by Goldthorpe in 1983, I assume that there would be no substantial social capital differences between the two partners.

However, it is difficult to estimate if the partner who had a higher level of social class also had higher levels of social capital compared with the spouse. It is also hard to estimate if couples with higher levels of social class heterogeneity (e.g. class-opposing families) also had higher levels of social capital heterogeneity.

According to the literature on gender differences in social capital, it will be necessary to consider the possible gender effect on the social capital heterogeneity analyses. For instance, the male-class-predominant families might have different patterns of social capital heterogeneity from the female-class-predominant families. In the latter case, the advantage of women caused by their superior class position may be counterbalanced by the gender disadvantage. Because of this, the two types of families will be examined separately in the following analyses.

6.3 Methods

In this chapter, there are three sets of preliminary analyses and two sets of main analyses. As discussed above, it is necessary to examine the relationships between social capital and social class, and the gender differences in social capital, before investigating social capital heterogeneity in cross-class families. Thus, the preliminary analyses are designed for these two issues.

The relationships between social capital and social class will be examined through graphical and statistical approaches, specifically boxplots and calculating Spearman's correlation coefficient 'rho' and testing its statistical significance. According to Kolmogorov-Smirnov tests and Shapiro-Wilk tests, the distributions of the three social capital factors of people in each social class were not *normal* (Notes 1 and 2). Thus, non-parametric tests are preferred. For non-parametric tests, 'the median ... is more appropriate than the mean' (Field, 2009, p.550). Since the boxplot clearly displays the median and the distribution, it is used to visualise the relationships between social capital and social class. It demonstrates the differences in social capital among people in eight social classes. Then the significance tests of Spearman's correlation coefficients will be used to examine if there were significant associations between the three social capital factors and social class, as well as the direction and the strength of the association. The principle of this test and the means of interpreting the results were introduced in Chapter 5 (Section 5.3.2).

Gender differences in social capital will be investigated through the Mann-Whitney tests, boxplots and the significance tests of Spearman's correlation coefficients. According to the normality tests (Kolmogorov-Smirnov tests and Shapiro-Wilk tests), the distributions of men and women's social capital in the eight social classes were not *normal* (Notes 3 and 4). Therefore, non-parametric tests will be selected. Firstly, Mann-Whitney tests will be applied to examine if the social capital levels of men and women were significantly different. The social capital scores of men and women will be arranged in ascending order, and then ranked

respectively. Then the ranked positions of the social capital scores of men and women will be compared (the Mann-Whitney U statistic). If the result is significant at $p < 0.05$ level, one could be at least 95 per cent confident that the social capital levels of men and women were significantly different (Field, 2009, p.540-550). Secondly, boxplots will be used to visualise the relationships between social capital and the social class in the male and female samples. It demonstrates the differences in the median values and the distributions of the social capital scores between men and women in the eight social classes. Thirdly, the significance tests of Spearman's correlation coefficients will be applied to examine if the associations between the three social capital factors and the social class were significant in both the male and female samples. The direction and the strength of each association will also be shown.

After examining the gender differences in social capital in all families, box plots will be presented to illustrate the gender differences in social capital in seven types of families. Class-homogeneous families will be included as a reference group. Cross-class families will be divided into two large groups, male-class-predominant families and female-class-predominant families. Then, they are further divided into class-opposing families, class-mixed families, and class-adjacent families (Table 4.5 in Chapter 4).

Social capital heterogeneity in cross-class families will be examined through two sets of analyses. The first set of analyses examines the social capital heterogeneity in all families, and the second set examines that in seven types of families. Social capital heterogeneity is

measured through the difference in the social capital score between the male partner and the female partner through *within-couple comparisons*.

In the first set of analyses, stacked bar charts will be used to show the proportion of families in which the male partners had the higher level of social capital than the female partners, and the proportion of families in which the male partners had lower social capital. The sum of the two proportions is 1 (or 100%). This type of graph 'make(s) it easier to see what proportion one category is of the whole' (Diamond and Jefferies, 2001, p.15). It demonstrates the probability that men had the advantage or disadvantage of social capital over their female partners.

It is, then, followed by the Wilcoxon signed-ranks tests which examine the significance and the direction of the difference in social capital between partners. This is a non-parametric test for the non-normally distributed social capital factors. This test can find out the differences between the two groups (i.e. the social capital of the male partner and the female partner) through ranking. Since partners might have an influence on each other, the Wilcoxon signed-ranks test is selected for comparing the two related groups (i.e. the male partner and the female partner). If the result is significant at $p < 0.05$ level and the z value is negative, one could be at least 95 per cent confident that the social capital scores of the male partner were significantly higher than the female partner. If the result is significant at $p < 0.05$ level and the z value is positive, the results were in the opposite direction (Bryman and Cramer, 2009,

p.170-172; Field, 2009, p.552-558).

In the second set of analyses, stacked bar charts and the Wilcoxon signed-ranks will be applied again for seven types of families respectively. In addition, the Kruskal-Wallis tests and Jonckheere-Terpstra tests will be applied to investigate if the degree of social class heterogeneity is associated with the degree of social capital heterogeneity. The Kruskal-Wallis test is used to examine the significance of the differences. The Jonckheere-Terpstra test is used to examine if these families were in a meaningful order in terms of social capital heterogeneity. Both tests are non-parametric, and will be applied for the two comparisons. One is between three types of male-class-predominant families and class-homogenous families; the other is between three types of female-class-predominant families and class-homogenous families.

If the H statistic of the Kruskal-Wallis test was significant at $p < 0.05$ level, one could be at least 95 per cent confident that the degrees of social capital heterogeneity in the three types of cross-class families and class-homogenous families differ significantly. In the results of the Jonckheere-Terpstra test, the sign of the z score denotes the direction of the order. A positive z score means that the medians of social capital heterogeneity of listed families were in an ascending order. A negative z score indicates that the medians were in a descending order. Before the analyses, I assume that the greater social class heterogeneity couples had, the greater social capital heterogeneity couples had. This assumption is directional so that

one-tailed significance will be reported.

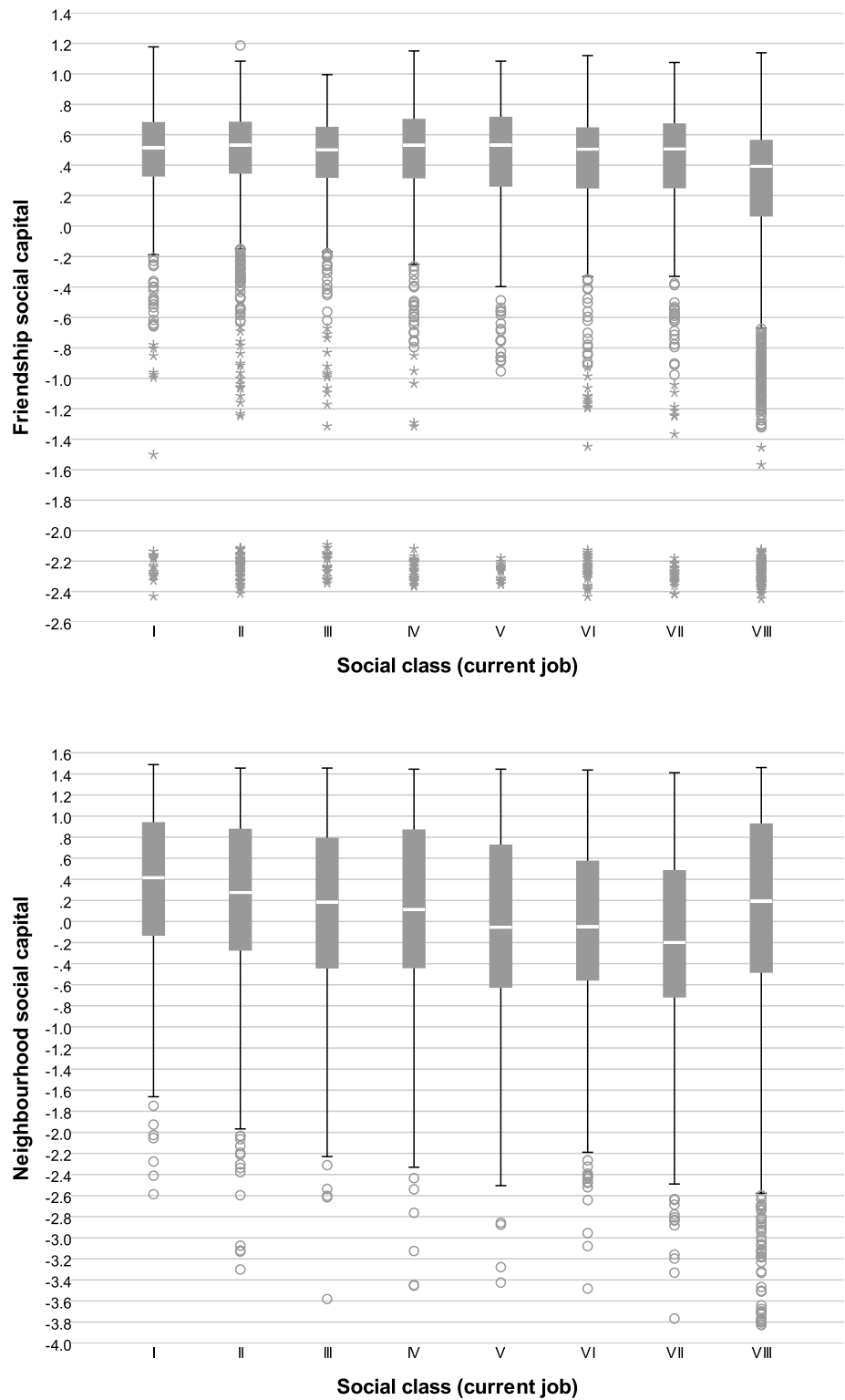
6.4 Preliminary analyses

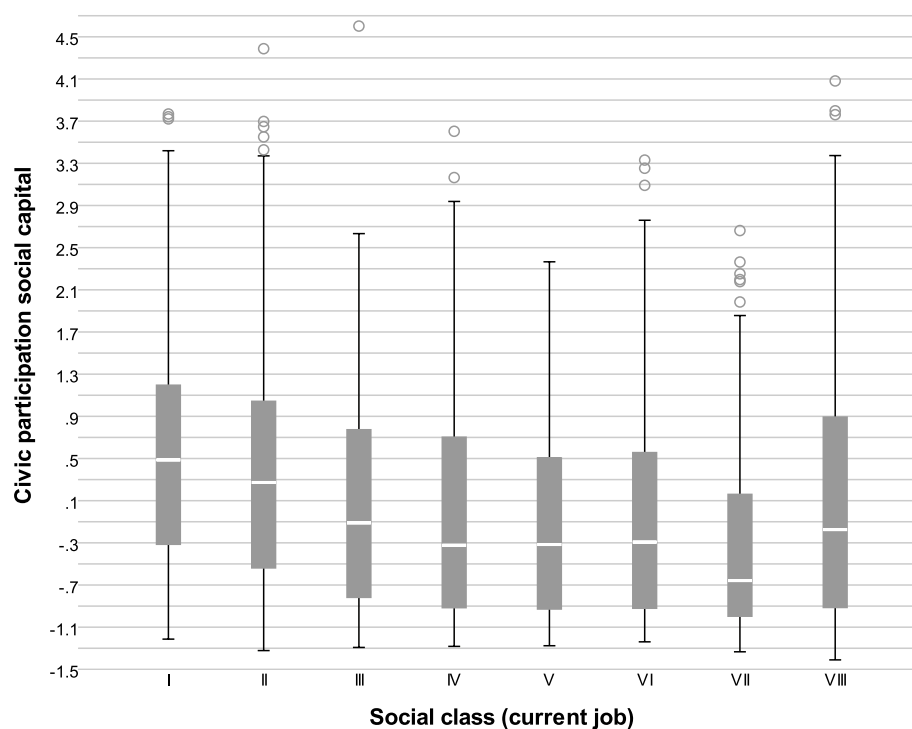
6.4.1 Relationships between social capital and social class

Figure 6.1 shows the boxplots of the three social capital factors in eight social classes. In the three social capital factors, civic participation social capital had the most noticeable descending feature across social classes. It could also be seen in neighbourhood social capital, whereas it is hardly visible in friendship social capital.

The medians of friendship social capital in the eight social classes were similar. In the service classes, the median of Class II (lower managerial, administrative and professional occupations) was slightly higher than Class I (higher managerial, administrative and professional occupations). In the intermediate classes, the median of Class IV (small employers and own account workers) was slightly higher than Class III (intermediate occupations). In the working classes, the median of Class V (lower supervisory and technical occupations) was slightly higher than Classes VI (semi-routine occupations) and VII (routine occupations). The median of Class VIII (currently not in the labour force) was the lowest of the eight classes.

Figure 6.1 Boxplots for distributions of social capital in eight social classes using the current-job NS-SEC, 2008





Note:

i The most-recent-job version is in Note [5].

Source: BHPS, 1991-2008

The midspreads (i.e. the middle 50 per cent values) of the box plots are also similar across the eight social classes. Only the midspread of Class VIII was relatively wider. The friendship social capital in the eight social classes had symmetrical distributions except the outliers. The outliers overwhelmingly clustered on the low side. If the most-recent-job version NS-SEC was used to measure the social class, a very similar pattern appeared (Note 5). The only obvious difference was that the friendship social capital of people in Class VIII had many outliers in this version. It means that the friendship social capital of people who were temporarily out of the labour force or retired might deviate greatly from people who had never been employed (more discussions about people in Class VIII is given in Section

4.3.2 in Chapter 4).

There are some extreme outliers in the box plots of friendship social capital by social class. These are the people who did not give answers to the questions about the three closest friends. Only a few of them provided the information about the current job or the last job of their first friends, either retired, in full-time education, or looking after the home or family. The majority of them answered questions about the level of job-seeking help which they could get from people outside the household and parents' social classes. About 5.6 per cent of them were aged between 16 and 30. The rest of them were evenly distributed in three age groups, between 31 and 45, 46 and 60, and older than 60 (30.3, 28.5, and 35.6 per cent respectively).

These questions are asked in the self completion questionnaire. It is not surprising that the completion rates of these questions are lower than the main interview questionnaire. They may be overlooked due to the complication of the question wording, unexpected interruption or other reasons. However, the data collected through the self completion questionnaire is valuable, since it is normally about the sensitive and personal issues.

This thesis includes these respondents since they might have very few friends (or narrow friendship networks) so that they did not answer questions about the three closest friends. It is also possible that they did have close friends but refused to answer these questions. If

these respondents were excluded, the friendship social capital would have been overestimated. Therefore, this thesis includes them in all of the social capital analyses to represent people with low friendship social capital. To improve the accuracy of this measure, future research could ask more details about the respondents' friendship networks rather than only focus on three closest friends.

Together these boxplots suggest that the differences in friendship social capital between people in Class I to Class VII were not obvious. People who were out of the labour force (Class VIII) tended to have a lower level of friendship social capital than the other social classes.

In boxplots of neighbourhood social capital and the social class, the descending pattern of the medians was relatively clear. In the service classes (Classes I and II), the intermediate classes (Classes III and IV) and some working classes (Classes V to VII), people in the higher layers tended to have a higher level of neighbourhood social capital than in the lower class layers. However, the median of people in Class VIII was close to the intermediate classes and higher than other working classes. If the most-recent-job version NS-SEC was used, the median of people in Class VIII was still higher than Class VII. It suggests that people who used to have a job but were out of the labour force at the time of the interviewing might have a higher level of neighbourhood social capital on average than people who had never done any paid work.

The midspreads of the eight box plots have a large scale of overlaps, and are all skewed to the low side. Compared with other classes, Class VIII had the largest overall spread. It implies that the variability of neighbourhood social capital of people in Class VIII was higher than other classes. In addition, all box plots had some outliers on the low side. It is notable that when the most-recent-job version NS-SEC was used, the box plot of Class VIII had no outliers at all. It suggests that by excluding people who used to have paid work from Class VIII, the number of extreme cases reduced dramatically.

In short, it is likely that the lower the social class a person was in, the lower the neighbourhood social capital he or she had, except people in Class VIII. However, the differences in neighbourhood social capital between the eight social classes were not very clear.

Civic participation social capital differed more dramatically across the eight social classes compared with the other two social capital factors. The medians of people in the first four classes (Classes I to IV) were in an obviously descending order. The medians of civic participation social capital of people in Class IV to Class VI were similar, and they were all higher than the median of people in Class VII. The median of people in Class VIII was close to the intermediate classes (Classes III and IV). If the most-recent-job version NS-SEC was used, it was close to Class VII and lower than the other social classes.

The midspread of the eight box plots also had a descending pattern, but was quite weak. The pattern is clearer when the most-recent-job version NS-SEC was applied. All box plots had overlaps and were skewed to the high side. Outliers also clustered on the high side. The overall spread of civic participation social capital of people in Class VIII was twice as wide as the spread when the most-recent-job version NS-SEC was used. It implies that people who used to have paid work but were not in the labour force at the time of the interview tended to have a higher level of civic participation social capital than people who had never done any paid work.

In a word, these boxplots show that the lower social class one was in, the lower level of civic participation social capital one had (except people in Class VIII defined by their current job).

Table 6.1 shows that all three social capital factors were significantly and positively associated with the social class. In other words, one could be 99 per cent confident to conclude that the higher the social class one was in, the higher level of social capital one had. If the most-recent-job version NS-SEC was used, the associations between the social class and informal social capital were still quite weak ($r_s=0.093$ and 0.174), while that between the social class and formal social capital was stronger ($r_s=0.305$). The strongest correlation was between friendship social capital and the social class, and the weakest correlation was between neighbourhood social capital and the social class.

Table 6.1 Spearman's correlation for the association between social capital and social class (using the current-job NS-SEC), 2008

	Friendship social capital	Neighbourhood social capital	Civic participation social capital
Social class	0.191 ^{***}	0.068 ^{***}	0.140 ^{***}

Note:

i The coding of two social class variables: the higher class the respondent was in, the higher value was assigned to these variables.

ii All tests are two-tailed.

iii ^{***}: $p < 0.001$.

iv The most-recent-job version is in Note [6].

Source: BHPS, 1991-2008

If the most-recent-job version NS-SEC was used, the three social capital factors also positively and significantly correlate to the social class. However, the strength of the correlation has changed. The association between friendship social capital and the social class has weakened slightly. The associations between the other two social capital factors and the social class are all strengthened. It is notable that the strength of the association between civic participation social capital and social class increased to a modest level.

To sum up, in boxplots the associations between three social capital factors and social class were not very obvious, but there were descending tendencies. The significance tests of Spearman's correlation coefficients showed that people in the higher social classes tended to have higher levels of social capital, and the associations were highly significant.

6.4.2 Differences in social capital between men and women in all families

Table 6.2 indicates that the medians of the three social capital factors for men were all higher than for women. The U statistic shows that informal social capital (i.e. friendship social capital and neighbourhood social capital) of men and women differed significantly. The difference in friendship social capital between men and women was highly significant ($p < 0.001$). In contrast, the difference in civic participation social capital between men and women was not significant ($p > 0.1$).

Table 6.2 The Mann-Whitney test for differences in social capital between men and women, 2008

	Friendship social capital	Neighbourhood social capital	Civic participation social capital
Median			
Men	0.52	0.19	-0.04
Women	0.45	0.14	-0.11
Mann-Whitney (U) ⁱ	4,815,423.00***	5,569,709.00*	5,724,036.00
Z	-11.38	-2.00	-0.08
N	6,771	6,771	6,771

Note:

i 2-tailed test.

ii *: $p < 0.05$, ***: $p < 0.001$.

Source: BHPS, 1991-2008

One should be aware that the measure of friendship social capital was, by design, gendered. In Chapter 5, I discussed the components of social capital (Figure 5.1). One of the indicators is the percentage of male friends in the three closest friends. Since men were more likely to have male friends than women, men would easily defeat women in respect of this indicator.

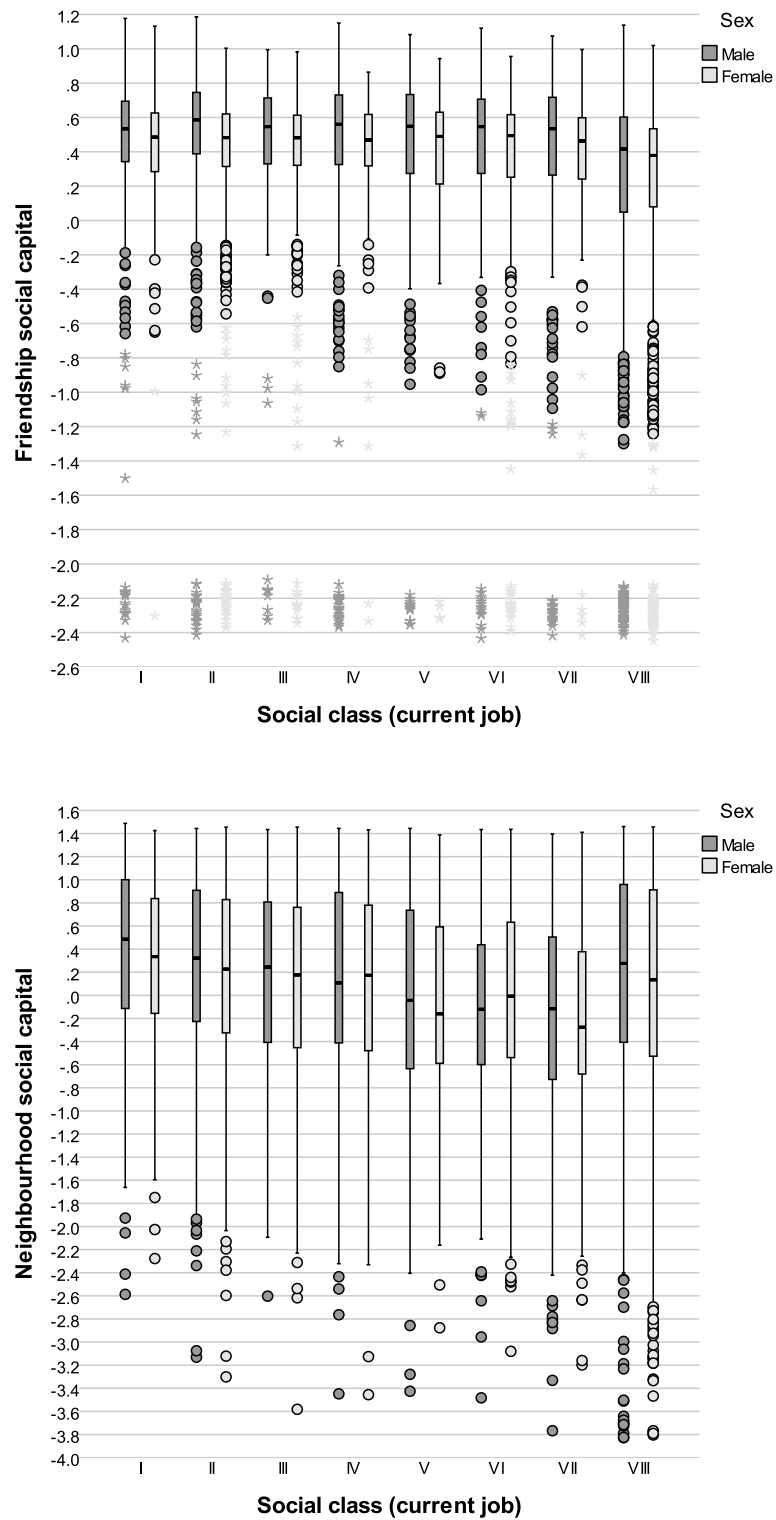
This indicator loaded highest on friendship social capital, modestly on neighbourhood social capital, and lowest on civic participation social capital (Table 5.2). Thus, it is not entirely surprising that men's friendship social capital was significantly higher than women's.

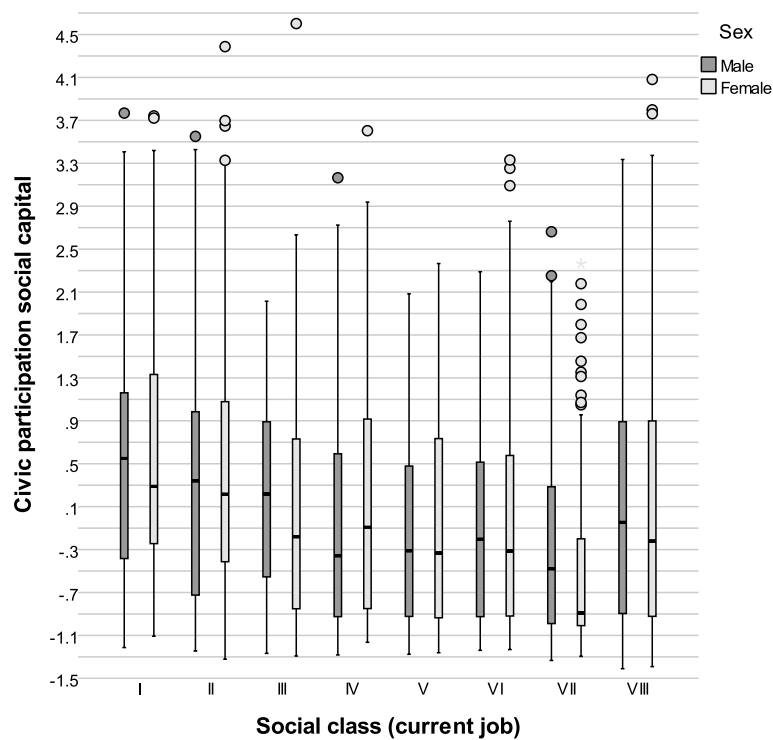
The social capital advantage of men over women may be caused by other reasons. Lin claimed that men not only had more valuable resources, but also had more valuable social contacts than women (2000). Therefore, these results may well reflect the gender effect on social capital inequality in real life.

I now consider how gender may affect social capital, by comparing men and women in the same social classes – Figure 6.2. Through these box plots, I will also investigate if the associations between social class and social capital in the male and female samples are similar or different, and whether women were disadvantaged in social capital in every class.

Figure 6.2 shows that, similar to Figure 6.1, the median friendship social capital of men and women in the eight social classes were similar. The median neighbourhood social capital and the median civic participation social capital had clearer descending feature across the eight social classes in the male and female samples. In most social classes, the median social capital of men was higher than that of women. A few exceptions were found in neighbourhood social capital and civic participation social capital (e.g. in Class IV, small employers and own account workers).

Figure 6.2 Boxplots for distributions of social capital in eight social classes (using the current-job NS-SEC) by sex, 2008





Note:

i The most-recent-job version is in Note [7].

Source: BHPS, 1991-2008

The midspreads (middle 50%) of social capital in the eight classes had extensive overlaps. In most cases, the social capital of people in Class VIII had the widest spread. This implies that the variability of the social capital of people who had never been in paid work tended to be greater than other classes. This is similar to Figure 6.1, the box plots of friendship social capital had quite symmetrical distributions except the outliers. The distributions (except for outliers) of neighbourhood social capital and civic participation social capital were skewed. The ones for neighbourhood social capital were skewed to the high side, while the ones for civic participation social capital were skewed to the low side. In addition, if the most-recent-job version NS-SEC was used, there were fewer extreme values (outliers).

Table 6.3 Spearman's correlation for the association between social capital and the social class (using the current-job NS-SEC) by sex, 2008

	Friendship social capital	Neighbourhood social capital	Civic participation social capital
<i>Social class</i>			
Men	0.181 ^{***}	0.082 ^{***}	0.142 ^{***}
Women	0.183 ^{***}	0.051 ^{**}	0.142 ^{***}

Note:

i The coding of two social class variables: the higher class the respondent was in, the higher value was assigned to these variables.

ii All tests are two-tailed.

iii **: $p < 0.01$; ***: $p < 0.001$.

iv The most-recent-job version is in Note [8].

Source: BHPS, 1991-2008

Table 6.3 shows that although the association between social capital and the social class was not very obvious in the boxplots (Figure 6.2), Spearman's correlation tests proved that both men and women's social capital significantly and positively correlated with their social class. Namely, the higher social class a man or woman was in, the higher the social capital he or she had. The associations were highly significant at $p < 0.01$ level. It means that one could be at least 99 per cent confident to make this conclusion.

This is also similar to Table 6.1, the association between friendship social capital and social class was the strongest compared with the other two associations. The association between neighbourhood social capital and social class was the weakest. All associations were quite weak. However, if the most-recent-job version NS-SEC was used to measure social class, the association between civic participation social capital and the social class increased to a modest level.

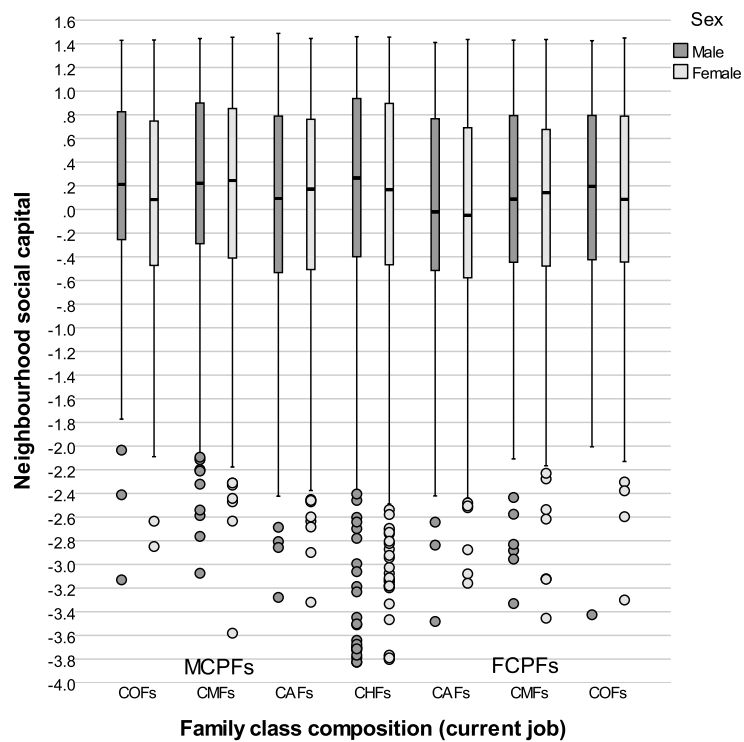
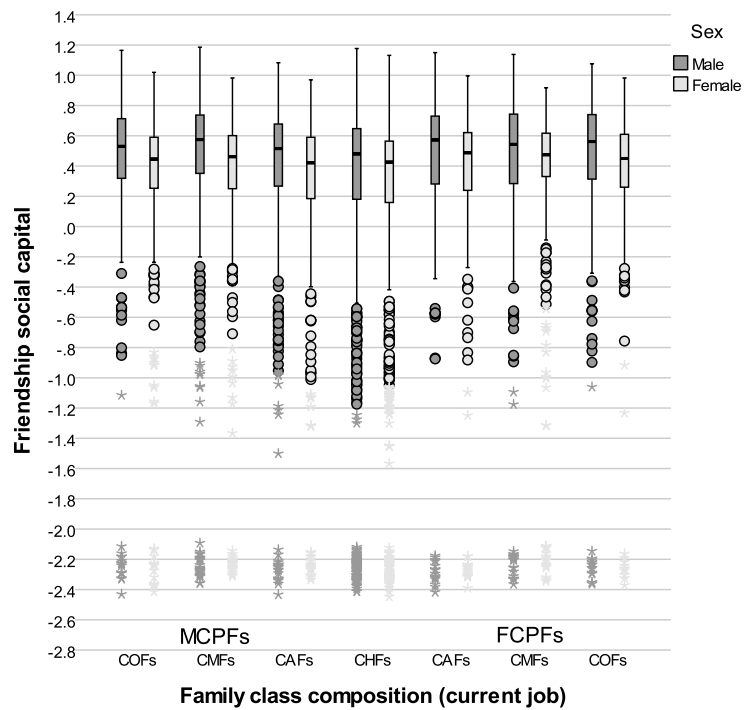
The strength of the correlation between friendship social capital and social class in the female sample was slightly larger than the male sample. In contrast, the strength of the correlation between neighbourhood social capital and social class in the female sample was much smaller than the male sample.

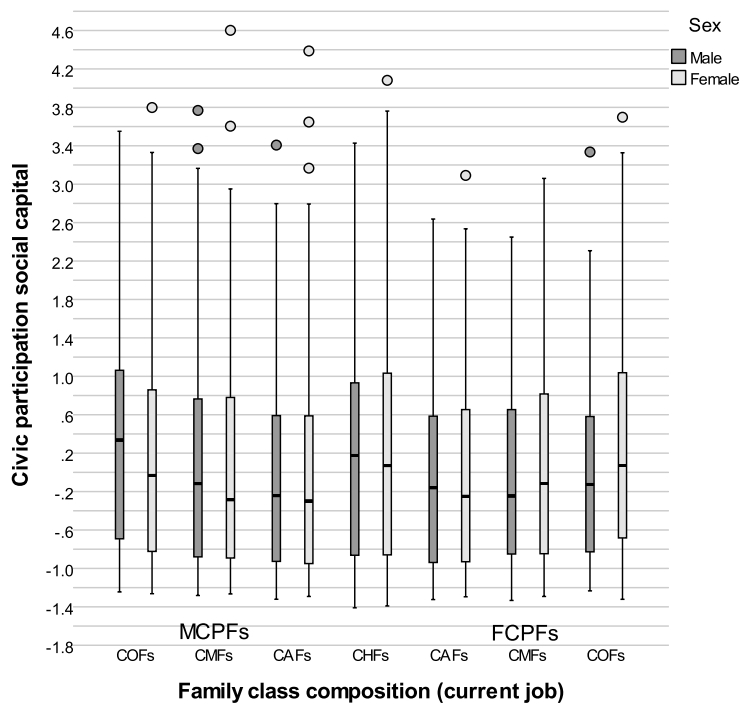
In short, the above three analyses revealed that, in general, men tended to have a significantly higher levels of social capital than women. All the three social capital factors of men and women were positively and significantly associated with their social class, but the correlations, while statistically significant, were not very strong.

6.4.3 Differences in social capital between men and women in seven types of families

Figure 6.3 illustrates the differences in social capital between men and women in the seven types of families. It is notable in that it compares the social capital of men and women in the same type of family rather than in the same families. In most cases, differences in social capital were marked. Only the differences in neighbourhood social capital in the class-mixed male-class-predominant families, and the class-adjacent female-class-predominant families were not very clear. If the most-recent-job version NS-SEC was used, the difference in civic participation social capital in class-adjacent female-class-predominant families was also hardly observable.

Figure 6.3 Boxplots for distributions of social capital by sex in seven types of families (measured through the current job), 2008





Note:

i The most-recent-job version is in Note [9].

Source: BHPS, 1991-2008

In most of the male-class-predominant families, men tended to have a higher median social capital than women. There were only a few exceptions. In class-adjacent and class-mixed families, men's median neighbourhood social capital was lower than women's. If the most-recent-job version NS-SEC was used, in these two types of families, men and women's neighbourhood social capital were very similar. It seems that if men were in a higher social class than their partner, it was very probable that they also had a higher level of social capital.

In female-class-predominant families, the women's advantage in social capital was not very clear. Sometimes, even if women were in the higher social class than their male partner, their

median social capital was still lower than the men's. Women tended to have a lower median friendship social capital than men in any type of family. The reason might be that the friendship social capital was the most gendered social capital factor compared with the other two factors (more discussion in Section 6.4.2). The median neighbourhood social capital of women in class-mixed families was higher than men's, but in class-adjacent and class-opposing families, it was lower. If the most-recent-job version NS-SEC was used, the opposite was the case. The social class, to some extent, reflected women's advantage in civic participation social capital. If the difference between women and men's social class was large enough (e.g. class-mixed and class-opposing families), women's median civic participation social capital was higher than men's.

It is difficult to observe the differences in median social capital heterogeneity between the seven types of families. Median friendship social capital heterogeneity and median neighbourhood social capital heterogeneity were very similar across the seven types of families. The differences in median civic participation social capital heterogeneity between seven types of families were relatively clear. Class-opposing families tended to have a higher level of median civic participation social capital heterogeneity than class-mixed, class-adjacent and class-homogeneous families. It is notable that the level of median social capital heterogeneity in class-homogeneous families was not distinctly lower than the six types of cross-class families.

It is also very difficult to compare the median social capital heterogeneity of male-class-predominant families with female-class-predominant families. The only observable pattern is that in class-opposing families, median civic participation social capital heterogeneity in male-class-predominant families was higher than in female-class-predominant families. With respect to the other two social capital factors, men tended to have a higher median than women, even if the women were in a higher social class than their male partner. It further confirms that men tended to have a higher level of social capital than women even if they had disadvantages in terms of the social class.

To sum up, there were differences between men and women's social capital in cross-class families. However, in some types of cross-class families, the differences were not very obvious. In families where the male partner's social class position was higher than the female partner, the men's median social capital also tended to be higher than the women's. In contrast, in families where the female partner's social class position was higher than the male partner, the women's median social capital was less likely to be higher than the men's. It seems that the occupational class only reflected the inequality of formal social capital, but not the inequalities of the informal social capital. No matter how different the two partners were in terms of social class, the difference in median friendship social capital and median neighbourhood social capital between men and women were hardly observable. Only median civic participation social capital heterogeneity was, to some extent, associated with the social class heterogeneity. The results also reveal that men tended to be advantaged in social capital

over women even if their social classes were lower.

6.4.4 Hypotheses

At the beginning of this chapter, two research questions were raised: (1) Were ‘cross-class’ partners heterogeneous in social capital? (2) Did the social classes of individuals defined by the NS-SEC accurately reflect their social capital inequalities?

The preliminary descriptive analyses revealed that social capital and social class were significantly and positively correlated in both the male and female samples. In general, men tended to have a higher level of social capital than women. Based on these findings, two hypotheses could be constructed:

Hypothesis I: In cross-class families, the levels of social capital of the two partners were different.

Hypothesis II: In cross-class families, the partner who was in the higher social class had a higher level of social capital than the partner who was in the lower social class. Moreover, families with greater social class heterogeneity were likely to have greater social capital heterogeneity than families with a lower level of social capital heterogeneity.

6.5 Social capital heterogeneity within cross-class families

This section examines within-couple social capital differences. The first part examines social capital heterogeneity in all families. The second part examines the social capital

heterogeneity in seven types of families. They are different from Sections 6.4.2 and 6.4.3 which examines the general gender differences in social capital. In these sections, the social capital levels of men as a whole were compared with that of women. In Section 6.4.3, families were divided into seven types. Then the male sample was compared with the female sample in terms of their social capital distributions.

As discussed above in Section 6.2, people in the higher social classes tended to be more advantaged in social capital than people in the lower social classes, and men tended to be more advantaged in social capital than women. The class effect, the gender effect and the family effect were intertwined which facilitated the social capital inequality. To investigate the class effect and the family effect on social capital, it is necessary to separate the gender effect from them.

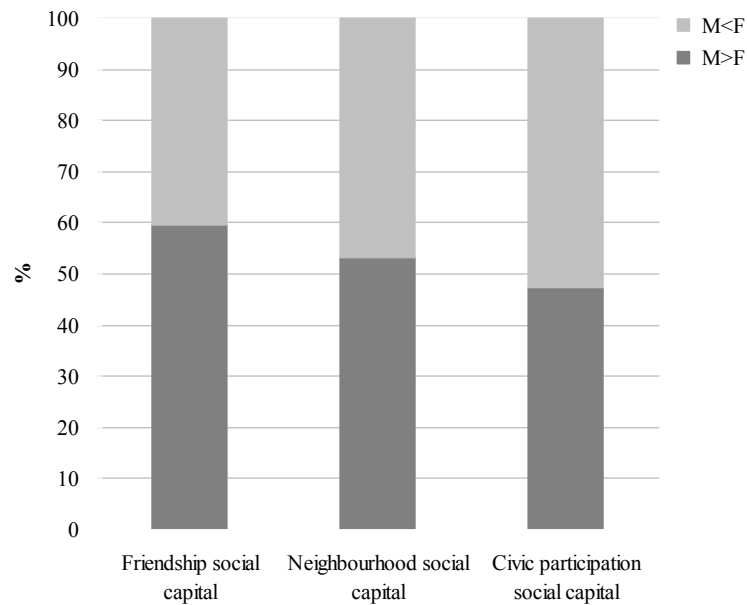
For this reason, instead of looking at the overall male and female samples, I will look at families and compare the social capital of the male partner with that of their female partner. In each family, the difference between the social capital of the male and female partner is known as social capital heterogeneity. The unit of analysis changes from individuals (Sections 6.4.2 and 6.4.3) to couples (Section 6.5). By comparing the results of all analyses, one could find out whether any other factors besides gender affected the social capital heterogeneity, such as family class composition and within-couple mutual influences in social capital.

6.5.1 Social capital heterogeneity in all families

Figure 6.4 illustrates the proportion of families in which the male partner had a higher level of social capital than their female partner, and families in which the male partner had a lower level of social capital. The majority of families had the male partners with a higher level of friendship social capital than their female partner. It, to some extent, reflects that the male partners were more likely to be advantaged in getting job-seeking and promotion resources from their friendship networks. It is notable that even if, by design, the friendship social capital may be gendered, there were still about 40 per cent of families in which the female partners' friendship social capital levels were higher than their male partners. The male partners' advantages over their female partners in neighbourhood social capital were weaker. The proportion of male-neighbourhood-social-capital-predominant families was quite similar to that of female-neighbourhood-social-capital-predominant families. Slightly more families had a female partner with a higher level of civic participation social capital than their male partner. It suggests that, in general, men were less likely to have richer social resources through civic participations compared with their female partners.

Table 6.4 reveals the significance of the within-couple social capital differences. The first two rows of the results are the proportions of male-social-capital-predominant families and female-social-capital-predominant families. These are consistent with Figure 6.4 above. Through the Wilcoxon signed-ranks tests, it confirms that men tended to have a significantly higher level of friendship and neighbourhood social capital than their female partners (z

Figure 6.4 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families, 2008



Note:

i 'M>F' denotes families in which the male partner had a higher level of social capital than the female partner. 'M<F' denotes families in which the male partner had a lower level of social capital than the female partner.

Source: BHPS, 1991-2008

values are significant and negative). Moreover, although women were more likely to have higher levels of civic participation social capital than their male partners, the differences were not significant.

6.5.2 Social capital heterogeneity in seven types of families

After examining the social capital heterogeneity in all families, this section will examine it in seven different types of families. Similar to the last section, it starts with a graphic approach to demonstrate the proportion of male-social-capital-predominant families and

Table 6.4 Wilcoxon signed-ranks tests for social capital heterogeneity in all families, 2008

	Column percentages		
	Social capital of the male partner – social capital of the female partner		
	Friendship social capital	Neighbourhood social capital	Civic participation social capital
M>F	59.56%	53.25%	47.24%
M<F	40.44%	46.75%	52.76%
N	3012	3012	3012
Z	-9.487***	-4.100**	-1.621

Note:

i **: $p < 0.01$; ***: $p < 0.001$.

ii ‘M>F’ denotes families in which the male partner had a higher level of social capital than the female partner. ‘M<F’ denotes families in which the male partner had a lower level of social capital than the female partner.

iii These tests are all two-tailed.

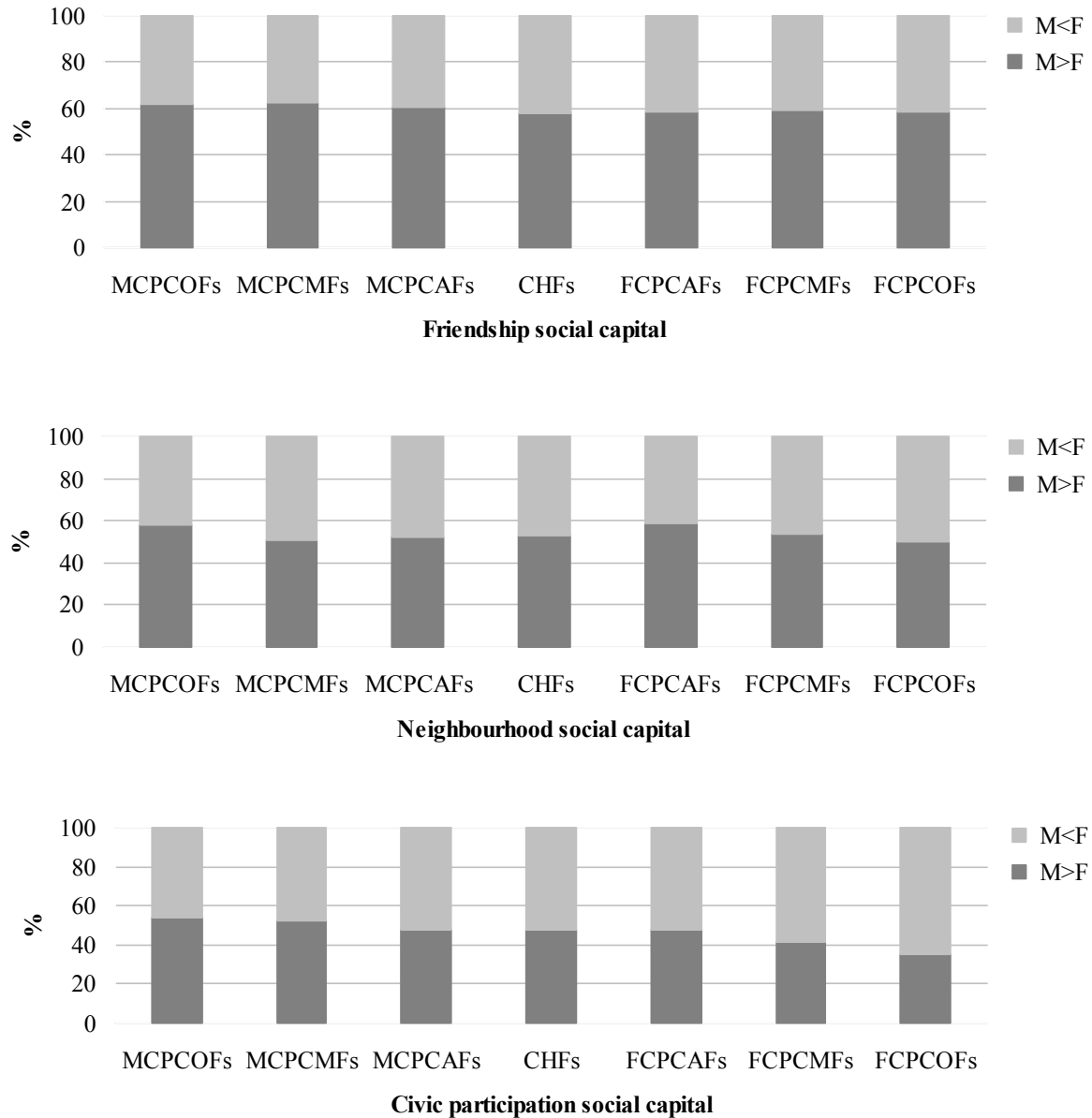
iv None of the couples has the equivalent values of social capital factors.

Source: BHPS, 1991-2008

female-social-capital-predominant families in seven types of families. Then the Wilcoxon signed-rank tests will be conducted to examine the significance of the within-couple social capital differences in seven types of families. Finally, the Kruskal-Wallis tests will be used to investigate the significance of the social capital heterogeneity differences, and the Jonckheere-Terpstra tests will be used to explore whether there was a significant trend that the differences of social capital increased as the differences of social class increased.

Figure 6.5 shows the proportions of the families in which men’s social capital were higher than their female partners, and the families in which men’s social capital were lower in seven families respectively. The proportions of two types of friendship-social-capital-heterogeneous families were quite similar across six types of

Figure 6.5 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families in seven types of families (measured through the current job), 2008



Note:

i 'M>F' denotes families in which the male partner had a higher level of social capital than the female partner. 'M<F' denotes families in which the male partner had a lower level of social capital than the female partner.

ii The most-recent-job version is in Note [10].

Source: BHPS, 1991-2008

cross-class families and same-class families. That is, it is more likely that men had a higher level of social capital than their female partners.

The proportions of male-neighbourhood-social-capital-predominant families were slightly lower than that of male-friendship-social-capital-predominant families. According to Table 6.5, it is still more likely that men had a higher level of neighbourhood social capital than their female partner, but the advantage of men in neighbourhood social capital is not as clear as that of men in friendship social capital. Male-class-predominant-class-opposing families and female-class-predominant-class-adjacent families had a larger proportion of male-neighbourhood-social-capital-predominant couples compared with the other five types of families. The association between the neighbourhood social capital heterogeneity and the social class heterogeneity is not clear.

The advantage of men in civic participation social capital over their female partner was much weaker, and sometimes even disappeared. Except male-class-predominant class-opposing and class-mixed families, women tended to have a higher level of civic participation social capital than their male partner (Table 6.5). In female-class-predominant families, as the social class differences increased, the likelihood that women's higher civic participation social capital levels were higher than their male partner increased.

Table 6.5 shows whether 'cross-class' partners had significantly different levels of social

Table 6.5 Wilcoxon signed-ranks tests for social capital heterogeneity in seven types of families (measured through the current job), 2008

Column percentages						
Social capital of the male partner – social capital of the female partner						
	MCPFs			FCPFs		
	Friendship social capital	Neighbour- hood social capital	Civic participation social capital	Friendship social capital	Neighbour- hood social capital	Civic participation social capital
<i>COFs</i>						
M>F	62.06%	58.20%	54.02%	58.37%	50.24%	35.41%
M<F	37.94%	41.80%	45.98%	41.63%	49.76%	64.59%
N	311	311	311	209	209	209
Z	-3.379**	-3.289**	-2.621**	-2.465*	-0.216	-3.567***
<i>CMFs</i>						
M>F	62.59%	50.60%	52.52%	58.91%	53.74%	41.67%
M<F	37.41%	49.40%	47.48%	41.09%	46.26%	58.33%
N	417	417	417	348	348	348
Z	-5.322***	-0.659	-1.346	-3.575***	-1.643	-2.466*
<i>CAFs</i>						
M>F	60.74%	52.10%	47.41%	58.40%	58.40%	47.48%
M<F	39.26%	47.90%	52.59%	41.60%	41.60%	52.52%
N	405	405	405	238	238	238
Z	-3.631***	-0.783	-0.439	-2.572*	-1.700	-0.269
CHF s						
	Friendship social capital	Neighbourhood social capital	Civic participation social capital			
M>F		57.92%		52.96%		47.52%
M<F		42.08%		47.04%		52.48%
N		1029		1029		1029
Z		-3.937***		-2.722**		-1.502

Note:

i *: p<0.05; **: p<0.01; ***: p<0.001.

ii 'M>F' denotes families in which the male partner had a higher level of social capital than the female partner. 'M<F' denotes families in which the male partner a the lower level of social capital than the female partner.

iii These tests are all two-tailed.

iv None of the couples has the equivalent values of social capital factors.

v The most-recent-job version is in Note [11].

Source: BHPS, 1991-2008

capital. In all six types of cross-class families, men's friendship social capital levels were significantly higher than their female partners. If the most-recent-job version NS-SEC was used, the advantage of men was non-significant in class-opposing female-class-predominant families. It is notable that same-class couples also differed significantly in friendship social capital, and the statistical significance level was very high ($p < 0.001$). Therefore, the friendship social capital heterogeneity was not a distinctive feature of cross-class couples. Couples in the same occupational levels were also likely to differ significantly in their friendship social capital.

The differences in neighbourhood social capital between partners were not significant in cross-class families, except in class-opposing male-class-predominant families. The reason might be that the indicators loaded highest on the neighbourhood social capital were all about the safety level of the local community. Most couples lived in the same community and same household. It diminishes the difference in neighbourhood social capital between the two partners. Another reason might be that the general gender difference in neighbourhood social capital is not as marked as in friendship social capital (Figures 6.2 and 6.3).

The results of civic participation social capital are consistent with the findings in Figure 6.4 as well as Figure 6.3. The degree of civic participation social capital heterogeneity was, to some extent, associated with the level of social class heterogeneity. In class-homogenous

families, the civic participation social capital discrepancies were not significant. However, if the class difference between two partners was large enough, as in class-opposing families, the civic participation social capital discrepancies became significant. In female-class-predominant families, even class-mixed couples had significantly different civic participation social capital.

In addition, in male-class-predominant families, men in class-opposing and class-mixed families had a significantly higher level of civic participation social capital than their female partner. The proportion decreases as the level of social class heterogeneity decreases. That is to say, men in class-opposing male-class-predominant families were most likely to have higher friendship social capital than their female partners compared with the other two types of male-class-predominant families and class-homogeneous families. In addition, female-class-predominant families with the higher level of social class heterogeneity were more likely to have women with the higher level of civic participation social capital than their male partner. The likelihood reduces as the social class heterogeneity level declines. This pattern could not be found in friendship social capital and neighbourhood social capital.

In short, social class reflects the civic participation social capital inequality quite well in within-couple comparisons, and the friendship social capital inequality in male-class-predominant families. Moreover, it seems that men's advantage in social capital over women was mainly due to their advantaged friendship social networks. Probably the

gender effect on friendship social capital heterogeneity was so strong that the social class effect was hardly observable.

Table 6.6 shows the difference and trends of social capital heterogeneity in the seven types of families. Class-homogeneous families were compared with three types of male-class-predominant families and three types of female-class-predominant families respectively.

The median values of friendship social capital heterogeneity in the three types of male-class-predominant families and class-homogenous families were all positive. The median values in the three types of female-class-predominant families and class-homogenous families were all negative. The same pattern was found in the comparisons of neighbourhood social capital heterogeneity. It means that, in these seven types of families, on average, men's informal social capital (i.e. friendship social capital and neighbourhood social capital) were higher than their female partner's.

The Kruskal-Wallis tests show that the differences in informal social capital heterogeneity between the four types of families were not significant. However, the Jonckheere-Terpstra tests show that friendship social capital heterogeneity declined significantly as social class difference reduced in male-class-predominant families and class-homogenous families.

Table 6.6 The Kruskal-Wallis tests and Jonckheere-Terpstra tests for differences and orders of median social capital heterogeneity in seven types of families (measured through the current job), 2008

	Social capital heterogeneity in MCPFs & CHFs: men – women ⁱ			Social capital heterogeneity in FCPFs & CHFs: women – men ⁱⁱ		
	Friendship social capital	Neighbourhood social capital	Civic participation social capital	Friendship social capital	Neighbourhood social capital	Civic participation social capital
<i>Median</i>						
CO						
Fs	0.093	0.119	0.070	-0.078	-0.007	0.310
C						
MFs	0.122	0.005	0.026	-0.095	-0.048	0.104
CA						
Fs	0.111	0.022	-0.032	-0.071	-0.084	0.017
CH						
Fs	0.070	0.026	-0.024	-0.070	-0.026	0.024
<i>Kruskal-Wallis test</i>						
H	5.105	5.579	11.913**	0.663	2.322	12.293**
df	3	3	3	3	3	3
<i>Jonckheere-Terpstra test</i>						
J ⁱⁱⁱ	764,835*	785,711	744,156***	502,036	520,409	543,751**
z	-1.936	-0.605	-3.255	0.825	-0.747	-2.744
N	2162	2162	2162	1824	1824	1824

Note:

i The social capital heterogeneity was measured through subtracting the value of the female partner's social capital from the value of the male partner's social capital.

ii The social capital heterogeneity was measured through subtracting the value of the male partner's social capital from the value of the female partner's social capital.

iii The Jonckheere-Terpstra tests are one-tailed.

iv *: p<0.05, **: p<0.01, ***: p<0.001.

v The most-recent-job version is in Note [11].

Source: BHPS, 1991-2008

If the most-recent-job version NS-SEC was used, the same association was found between the neighbourhood social capital heterogeneity and social class heterogeneity. Nonetheless, it has a different meaning. In the comparison between female-class-predominant families and

class-homogeneous families, the social capital heterogeneity was measured through subtracting the male partner's social capital score from the female partner's. In class-opposing female-class-predominant families, the women's neighbourhood social capital was, on average, higher than their male partner. In the female-class-predominant families with a lower level of social class difference and class-homogeneous families, the women's neighbourhood social capital was, on average, lower than their male partner. Therefore, the trend of the neighbourhood social capital heterogeneity in these families means that as the level of social class heterogeneity decreased, women's median neighbourhood social capital reduced quicker than their male partner.

As expected, formal social capital (i.e. civic participation social capital) heterogeneity was significantly associated with social class heterogeneity. In class-mixed and class-opposing male-class-predominant families, on average, men had a higher level of formal social capital than their partner. Once the class heterogeneity of male-class-predominant couples reduced, as in class-adjacent families and class-homogenous families, the median values of formal social capital heterogeneity became negative. Furthermore, in the three types of female-class-predominant families, the median values were all positive. It means that in these five types of families, the women's formal social capital was, on average, higher than men's.

The Kruskal-Wallis tests show that the differences in formal social capital heterogeneity

between these seven types of families were significant. The Jonckheere-Terpstra tests revealed a significant trend in the data. In female-class-predominant families, it means that as the degree of the social class difference reduced, the degree of formal social capital heterogeneity reduced. In male-class-predominant families, it means that as the degree of the social capital difference reduced, men's formal social capital, on average, reduced quicker than their female partner. If the most-recent-job version NS-SEC was used, the differences in formal social capital heterogeneity between the three types of male-class-predominant families and class-homogeneous families became non-significant.

To sum up, in the male-class-predominant families, the social class heterogeneity was associated significantly with friendship social capital heterogeneity. In the female-class-predominant families, the social class heterogeneity was associated significantly with civic participation social capital heterogeneity only. If the most-recent-job NS-SEC was used, the significant association in male-class-predominant families disappeared. The effect of social class on neighbourhood social capital was invisible in within-couple social capital comparison.

6.6 Summary

In this chapter, I reviewed the literature of the relationships between social capital and the social class, and the gender differences in social capital, in order to conduct hypotheses of

social capital heterogeneity in cross-class families. Then I did some preliminary descriptive analyses. The analyses of the relationships between social capital and social class revealed that the three social capital factors were all positively and significantly associated with social class, although the association was not very strong. The analyses of the gender difference revealed that men were likely to have a higher level of social capital than women. Even after controlling for the gender effect, social capital and social class were still significantly and positively correlated.

Based on these preliminary analyses, two hypotheses were conducted (Section 6.4.3). The key analyses of social capital heterogeneity in cross-class families were designed to examine these two hypotheses. With respect to the first hypothesis (that the social capital scores of ‘cross-class’ partners were different) results show that the friendship social capital of ‘cross-class’ partners differed significantly. The differences in neighbourhood social capital were significant in class-opposing male-class-predominant families. The differences in civic participation social capital were significant in class-opposing families and class-mixed female-class-predominant families. It suggests that cross-class couples may indeed have distinctive social positions, at least in class-opposing families. It is problematic to ignore the difference between partners whose occupations or employment status was different. For this reason, the individual approach is relatively better in reflecting the within couple difference than the conventional approach.

It seems that informal social capital differences between the male-class-predominant couples were more likely to be significant than the female-class-predominant couples. It probably reflects the combination of the gender advantage and the class advantage. Moreover, unless the social class differences between the two partners were large enough, like class-opposing families, the formal social capital differences were unlikely to be significant.

The second hypothesis examines if social class accurately described the social capital inequality. It was examined in two aspects: if the direction and the degree of the social capital difference were associated with the social class difference. The results of the first aspect show that only civic participation social capital reflected the social class advantage and disadvantage adequately. Namely, the partner in a higher social class than the other partner also tended to have a higher level of civic participation social capital. As for informal social capital, in the male-class-predominant families, the male partner not only was in the higher social class but also had a higher level of informal social capital. In female-class-predominant families, the gender effect on the social capital of individuals was so strong that the class effect was hardly observable. More specifically, no matter how large the social class difference was, the male partner was more likely to have a higher level of informal social capital than the female partner.

The results of the second aspect show that in the male-class-predominant families, social class heterogeneity was associated with friendship social capital heterogeneity (not

applicable to the case using the most-recent-job version of the NS-SEC). In female-class-predominant families, it was associated with civic participation social capital heterogeneity.

In short, social class reflected the inequality of formal social capital quite well, and the inequality of friendship social capital in male-class-predominant families. However, it was not very good at describing the inequality of neighbourhood social capital and friendship social capital in the female-class-predominant families. The reason might be that the gender factor had a strong effect on the informal social capital of individuals. It is also probable that the measure of friendship social capital was relatively highly gendered. On average, men were more likely to have a higher level of informal social capital than their female partner. It is consistent with the findings in Table 6.2.

McRae (1986) paid special attention to female-class-predominant class-opposing families, but did not include male-class-predominant families in her research on cross-class families. This selection was questioned by Carling (1991) who argued that male-class-predominant families should not be ignored. On the contrary, Goldthorpe (1983) believed that 'male-class-predominant families' were self-evidently class-homogenous families. According to the results in this chapter, male-class-predominant families should not be regarded as equivalent to class-homogeneous families in terms of social capital. The reason is that friendship social capital heterogeneity in male-class-predominant families was significantly

higher than in class-homogeneous families.

Further, male-class-predominant families had distinctive features compared with female-class-predominant families. For example, in male-class-predominant families, the direction of the informal social capital heterogeneity tended to be similar to the direction of the social class heterogeneity. Namely, the partner in the higher social class was likely to have a higher level of informal social capital than the other partner. However, in female-class-predominant families, the direction of the informal social capital heterogeneity tended to be opposite to the social class heterogeneity. For these reasons, male-class-predominant families should not be ignored in the study of cross-class families.

This chapter demonstrated that social class measured through the eight-class NS-SEC satisfactorily reflected the formal social capital inequality in female-class-predominant families and friendship social capital inequality in the male-class-predominant families (not applicable to the case using the most-recent-job version of the NS-SEC). It means that the version of social class used in this research, to some extent, indicates the social capital inequalities of individuals. However, some social capital inequalities were not described by the social class, for instance, the gendered informal social capital inequalities. Therefore, I can argue that it is necessary to incorporate social capital into the measurement of the socio-economic positions of individuals.

Although this research is the first to provide empirical evidence for this argument, a similar argument was proposed by Savage and his colleagues in 2005. They established a theoretical framework for incorporating social capital into the measure of social class. Conventionally, social class was measured through an ‘employment aggregate approach’ (Crompton, 1998). They suggested rethinking social class through Bourdieu’s capital approach. ‘CARs’ (i.e. assets, capitals and resources) could be used as a tool for understanding social class inequalities. Then social class could be measured ‘through its potential to accumulate and to be converted to other resources’ rather than the ‘distinct relations of exploitation’ (Savage, et al., 2005, p.31).

This chapter found that social class, measured through the ‘employment aggregate approach’, only partially described the social capital inequalities, especially in the gender and within-couple comparison. If both occupation and social capital are included in the measurement of an individual’s social class, it would be able to more accurately describe an individual’s social-economic position. Then,

‘(w)e thus become able to distinguish the main resources of inequality not through the simple assertion of the power of the economic, nor through sterile debates about exploitation in game playing relationships, but by an emphasis on the potential of certain CARs to be accumulated and converted over time and space, and in certain social, cultural and institutional settings’ (Savage, et al., 2005, p.45).

Moreover, this chapter found that couples may be homogeneous in some aspects of socio-economic positions (occupation) but heterogeneous in other aspects (social capital).

For example, the class-homogenous couples differ significantly in their informal social capital levels. Probably both the heterogeneity and the homogeneity are important to the measure of the social class. The heterogeneity could be estimated through considering an individual's class-related features, and the homogeneity could be estimated through applying the weight for the partner's characteristics (also see Acker, 1973; De Graaf and Heath, 1992; Sørensen, 1994). This matter will be examined further in due course.

In the next chapter, I will move on to examine the influences between partners in cross-class families. It is mainly about the influence of an individual's social capital on his or her partner's social capital. In the chapter after the next, the influence of an individual's social class on his or her partner's social capital will also be investigated.

CHAPTER SEVEN

SOCIAL CAPITAL MUTUAL INFLUENCES IN CROSS-CLASS FAMILIES

7.1 Introduction

In the last chapter, I examined differences between the social capital of partners. In all six types of cross-class families, partners had significant differences in friendship social capital. In some types of cross-class families, partners were also significantly different in neighbourhood social capital and civic participation social capital. Class-opposing partners, especially male-class-predominant families, have significant differences in most of the social capital scales. It suggests that some couples were heterogeneous not only in terms of their occupational level (cross-class families), but also in terms of social capital (heterogeneous socially). It questioned Goldthorpe's argument that the married couple 'still remains the basis of (class) homogamy' (1983, p.482).

After examining the social capital differences between cross-class partners, this chapter investigates whether partners in cross-class families, especially those also heterogeneous in terms of social capital, had an influence on each other socially (i.e. any mutual influence in terms of social capital). Specifically, I will explore if the occupations of individuals are

sufficient for indicating their social class positions as the individual approach proposed, and if it is necessary to consider the influences of the partner.

According to the literature on couple's social networks, couples tended to share some activities (e.g. visiting friends and parents, and participating in community organisations) and social networks after forming the partnership (Kalmijn and Bernasco, 2001; Kalmijn, 2003³). The longer the partnerships, the more social networks partners share with one another, and the frequency of contacting shared contacts increases, but the frequency of contacting independent contacts (i.e. contacts not shared with partners) decreases. It is known as the 'dyadic withdrawal hypothesis' (Johnson and Leslie, 1982; Kalmijn, 2003). If in contemporary Britain, partners also share social contacts and participate in joint activities, I assume that they, to some extent, influence each other in terms of social capital, even those who have differences in both occupational and social capital levels.

Therefore, the research question of this chapter is whether partners in cross-class families influenced one another in terms of social capital. This research question will be examined through scatterplots and tests of correlation. In cross-class families, if partners' social capital levels were significantly correlated, then social capital mutual influences exist. Otherwise, no significant influences of social capital existed. This finding will add one more piece to the jigsaw puzzle of cross-class families. It will demonstrate the possibility that couples may be

³ Both of these two studies are based on the datasets of the Netherlands.

heterogeneous in social capital, and at the same time associate in social capital.

7.2 Literature review

Theorists of the individual and joint classification approaches claimed that the class-related resources of individuals should be considered when measuring their social class positions. They claimed that the conventional approach overlooked the contribution of women's class-related resources, such as educational qualifications, occupation and income (Acker, 1973, p.938; West, 1978). They believed that these resources should be used as the indicators of women's social classes, at least, in the same way as men's class-related resources are used in the measure of men's social class (Britten and Heath, 1983; Stanworth, 1984; Pahl and Wallace, 1985).

In contrast, the conventional approach and the dominance approach acknowledged the influences between partners. More specifically, the occupations of the male head of household or the partner in the higher level of occupation had significant influences on the social class positions of their own and their partner (Goldthorpe, 1983; Erikson, 1984; Goldthorpe, 1984). Their assumption is that the influences were one-way. The influences of women or the lower-occupation partners' occupations on their own social classes were believed to be trivial, not to mention the influences of that on men or the higher-occupation partners' social classes.

A common problem of these approaches is that they neither provided empirical evidence on why within-couple mutual influences could be overlooked, nor the reason why the influences were one-way rather than two-way. This thesis believes that it is possible that both the class-related resources of individuals and the within-couple influences make some contribution to the measurement of social classes. In addition, the within-couple influences could be two-way, and the strength of the influences from different directions may be different. This chapter will investigate if there were any within-couple mutual influences (i.e. two-way influences) in terms of social capital between partners. The next chapter will continue to examine whether both the male and the female partners' occupations had significant influences on their partners' social positions.

Although there is no literature on social capital mutual influences between partners, the literature on couple's social networks and joint activities told a similar story. As the partnership develops, couples tend to share more and more friends. They also contact more frequently with common friends, but less frequently with independent friends (Kalmijn, 2003). If couples share friends and other social contacts, it is possible that they could both get information of or help with job-seeking or promotion from the mutual social contacts. Consequently, they influence each other on friendship social capital.

If couples, to some extent, participate in the activities of the same community organisations, they may become members of the same organisations (Kalmijn and Bernasco, 2001). As a

result, they may have some overlaps in civic participation social capital. Since many couples live in the same property based in the same neighbourhood, they may have the same contacts in the neighbourhood. If they visit neighbours together or both are the friends of the same neighbours, they probably also have some overlaps in neighbourhood social capital. In short, it is very likely that partners, more or less, influence one another in terms of all three scales of social capital.

Proponents of the conventional view and dominance approach promoted an idea that *sharing* was associated with *similarity*. For example, Goldthorpe argued that the husband and wife shared ‘reward’ and ‘class fate’, so that they must have a ‘large area of shared interest’ and should be in the same social class (1983, p.468-470). Erikson claimed that family members depended on each other and had ‘largely shared conditions’. Hence, the class positions of family members should be ‘alike’ (1984, p.502). If sharing is associated with similarity, I assume that partners largely sharing their social capital (i.e. influencing one another strongly in terms of social capital) should have a similar level of social capital. In contrast, partners hardly sharing any of their social capital (i.e. influencing each other weakly in terms of social capital) should have significantly a different level of social capital. If the opposite is the case, the link between sharing and similarity should be questioned. At least, it may be problematic to apply to the social positions measured through social capital.

The last chapter demonstrated that there were significant correlations between the social

classes of individuals and their social capital factors (see Table 6.1). Couples with a low level of social class homogeneity tended to differ greatly in civic participation social capital (see Table 6.5). It would be interesting to see if the strength of civic participation social capital associations also decreases as the levels of social class homogeneity decrease.

To sum up, the research question of this chapter is whether partners in cross-class families have mutual influences in terms of social capital. It can be divided into two hypotheses:

Hypothesis I: Partners, more or less, influence one another in terms of social capital;

Hypothesis II: Partners influencing each other strongly in terms of social capital have a similar level of social capital. In contrast, partners influencing each other weakly in terms of social capital have a significantly different level of social capital;

Hypothesis III: The strength of civic participation social capital associations decreases as the levels of social class homogeneity decrease.

7.3 Methods

This chapter contains four sets of analyses: two preliminary analyses on the associations of social capital in all families, and two main analyses on the same associations in six types of cross-class families and one type of class-homogenous family. Both the preliminary analyses and the main analyses will start with a graphical approach on the social capital associations between two partners, and end with calculating Spearman's correlation coefficient 'rho' and testing the statistical significance of the social capital associations.

The graphic approach will use scatterplots to visualise the association between the social capital of the male and female partners. Each scatterplot contains a cluster of circles which represent every couple's position in a coordinate. The position of the circle is determined by the position of the male partner's social capital on the Y-axis and the female partner's social capital on the X-axis. These scatterplots illustrate how the female partner's social capital level varies as the male partner's social capital level varies and *vice versa*. Through the pattern of the circle cluster, one can estimate the relationship between the male and female partners' social capital levels.

To clarify the direction of association, such plots usually contain a linear regression line which fits best to the dataset. This line represents a regression model of the association between the male and female partners' social capital. The slope of this line reveals if the relationship is positive or negative, and how quickly the female partner's social capital level increases or decreases as the male partner's social capital level increases. A sharper line pointing to the top right corner means that if the male partner's social capital increases by one unit, the female partner's social capital increases by more than one unit. In this case, the variation of the male partner's social capital is greater than the female partner's. A flatter line pointing to the top right corner indicates that if the male partner's social capital increases by one unit, the female partner's social capital increases by less than one unit. That is, the variation of the male partner's social capital is less than the female partner's.

The value of ' R^2 ' indicates the proportion of the variation in the male partners' social capital explained by the female partners' social capital, or the proportion of the variation in the female partners' social capital explained by the male partners' social capital. The square root of ' R^2 ' is the correlation coefficient ' r ', which reveals the strength of the association between the partners' social capital. The larger the ' r ' value, the stronger the association is between the male and female partners' social capital. An ' r ' value around 0.1, 0.3 and 0.5 means the association between the male and female partners' social capital is small, moderate, and strong respectively. It is notable that the ' r ' value here is the coefficient of Pearson's ' r ' rather than the coefficient of Spearman's ' ρ '. That is why the square roots of ' R^2 ' are different from the coefficients presented in the tables of correlation after the scatterplots.

Another test is the significance test of Spearman's correlation coefficient ' ρ ' for the association between the male and female partners' social capital. This test makes fewer assumptions about the comparability of individual social capital scores than that of Pearson's ' r '. Since the social capital variables are all not normally distributed, Spearman's correlation coefficient is more appropriate than Pearson's correlation coefficient (more detailed discussions about why Spearman's ' ρ ' is the most appropriate statistics for analysing the correlation between the two social capital variables could be found in Section 5.3.2). This test has been used in the last two chapters. The principle of this test and the interpretation of the statistics are explained in the method sections of these two chapters (Sections 5.3.2 and 6.3). In this chapter, it will be used again to examine the significance and the strength of the

social capital association between the three social capital factors of two partners.

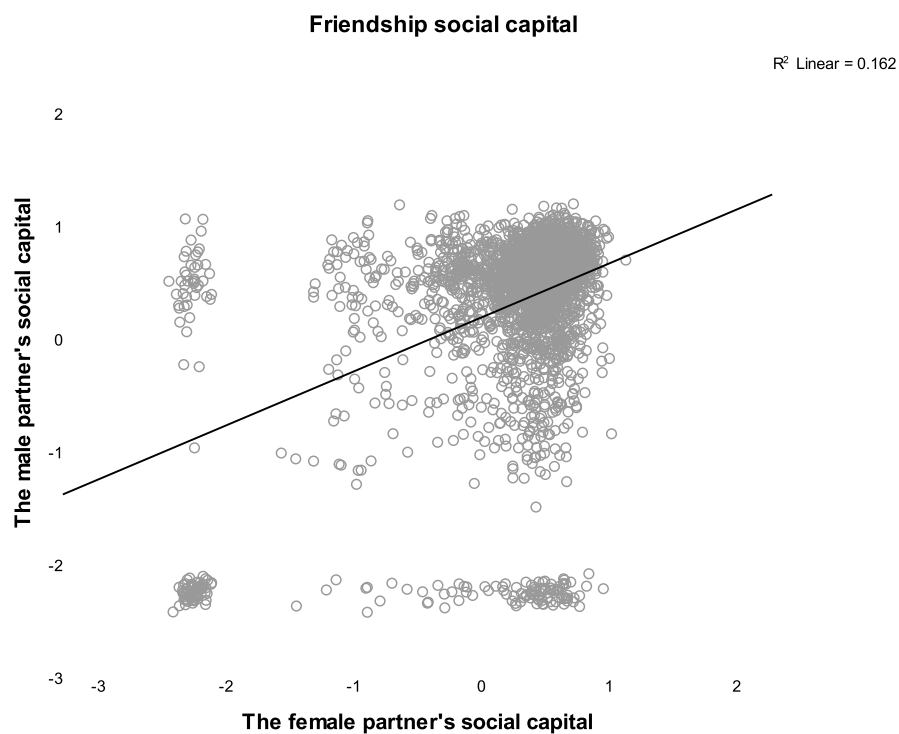
7.4 Preliminary analyses

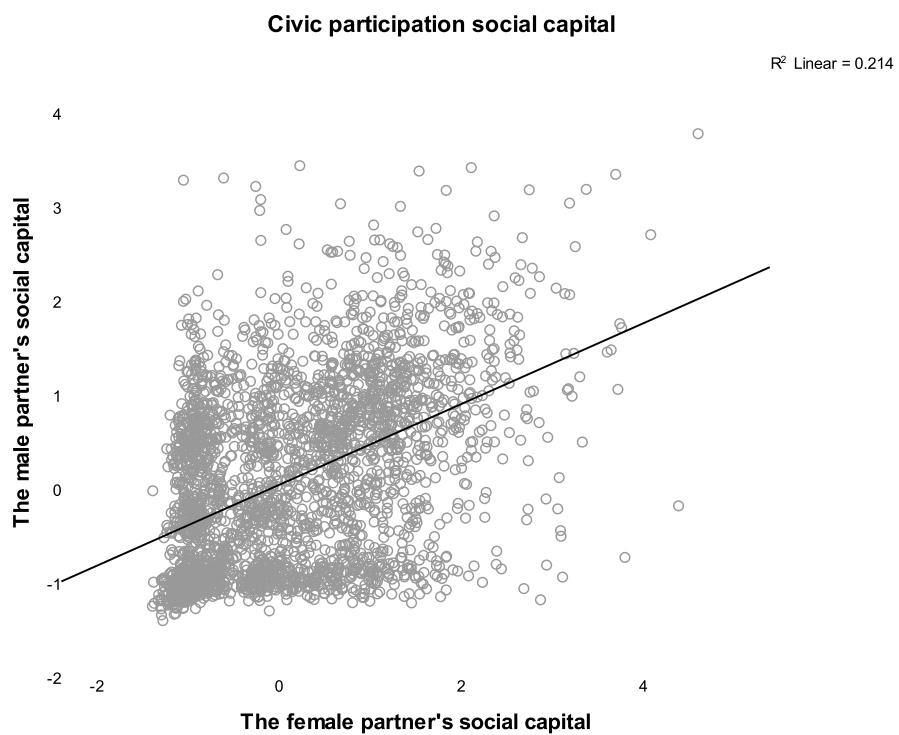
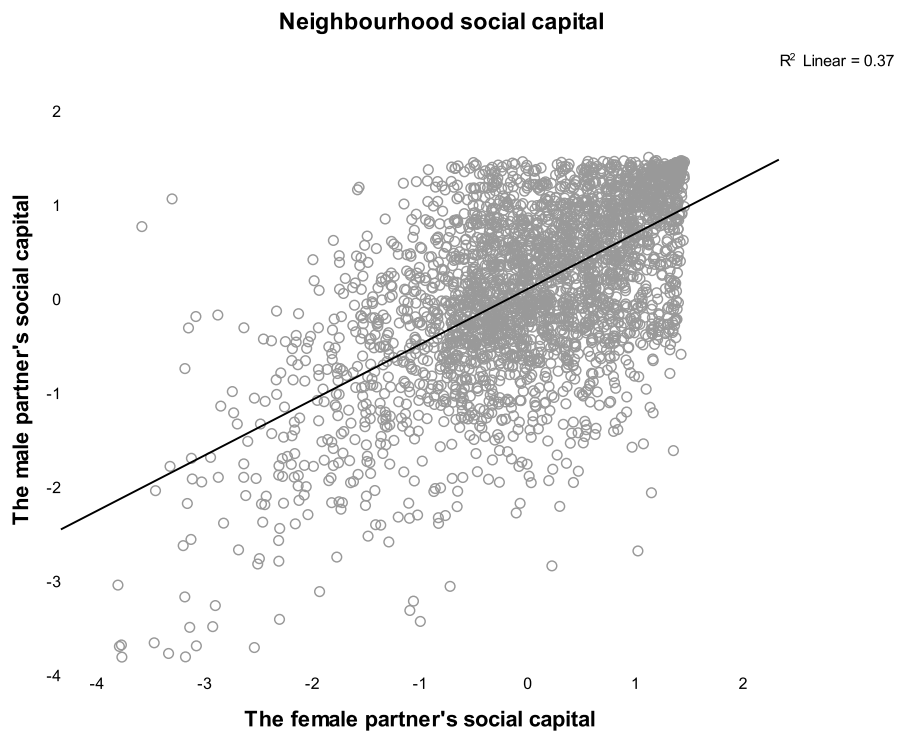
Figure 7.1 shows scatterplots illustrating the relationships between the male and female partners' three social capital factors. Three social capital factors were plotted separately. In the scatterplots of friendship social capital, couples mainly aggregated in the upper-right corner. Relatively smaller groups aggregated in the lower-left, lower-right and upper-left corners. This suggests that there are often couples where each partner had high levels of friendship social capital; conversely, in many couples both partners had low levels of friendship social capital. There are also large numbers of couples of which one partner had very high levels of friendship social capital and the other partner had very low levels of friendship social capital. It seems that the linear tendency of the association between the male and female partners' friendship social capital was not clear.

The circles aggregated in the lower-left, lower-right and upper-left corners of the scatterplot of the friendship social capital association should be interpreted with caution. They are the couples consisting of one or two partners who did not answer questions about three 'closest friends'. However, they did provide information about the job of the 'first friend', their parents' social classes and the levels of job-seeking help which they could get from people outside their household. If these cases were excluded, the scatterplot of friendship social

capital would only contain the cases aggregating in the upper-right area, and the pattern would be closer to that of the scatterplots of neighbourhood and civic participation social capital associations. However, this thesis keeps these people in all analyses. It is not clear whether these people did not answer the questions about closest friends because they did not have closest friends, or they failed to give proper answers. If the former is the case, their friendship social capital levels accurately reflect their narrow friendship networks and the lack of social resources embedded in them. More discussion is given in Section 6.4.1.

Figure 7.1 Scatterplots of the male and female partner's social capital, 2008





Source: BHPS, 1991-2008

However, in the scatterplots of neighbourhood social capital and civic participation social

capital, the circles mainly aggregated in one corner, either the upper-right or the lower-left. The further away from the corner, the circles are more spread. In these two scatterplots, linear patterns are clearer than the one for friendship social capital. It means that there were more partners both with high levels of neighbourhood social capital than those both with low levels of neighbourhood social capital. With regard to civic participation social capital, the opposite is the case.

The linear regression lines suggest that if there were linear relationships between the male and female partners' social capital, the relationships were all positive. It means that the higher level of social capital one had, the higher level of social capital his or her partner had. What is more, these regression lines are quite flat, and the slopes are similar. The tendency is that as the male partner's social capital increased by one unit, the female partner's social capital was very likely to increase by more than one unit.

The values of R^2 reveal that the female partners' friendship social capital levels account for 16.2 per cent of the variation in the male partners' friendship social capital levels; the female partners' neighbourhood social capital explains 37 per cent of the variation in the male partners' neighbourhood social capital; and the female partners' civic participation social capital accounts for 21.4 per cent of the variation in the male partners' civic participation social capital. These values reflect the patterns of three scatterplots that the cases in each scatterplot are not clustered tightly around the lines of best fit. The scatterplot of friendship

social capital has more cases which deviated from the regression line than the scatterplots of the other two social capital factors. The majority of the variation of the male partners' social capital could not be explained by their female partners' social capital. There must be other factors which influence the male partners' social capital. Gender may be one of them.

The square roots of R^2 values suggest that the association between the male and female partners' neighbourhood social capital may be the strongest compared with that between the partners' other two social capital factors.

Table 7.1 Spearman's correlation coefficients of the associations between the male and female partners' social capital, 2008

	Social capital of the female partner		
	Friendship Social capital	Neighbourhood social capital	Civic participation social capital
Social capital of the male partner			
Friendship social capital	0.225***	-0.011	0.012
Neighbourhood social capital	0.035	0.563***	0.178***
Civic participation social capital	0.050**	0.088***	0.464***

Note:

i All tests are two-tailed.

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

Source: BHPS, 1991-2008

Table 7.1 shows whether the associations between the male and female partners' social capital factors are significant, and how strong the associations are. The values on the forward diagonal are the Spearman's correlation coefficients of the associations between the same social capital factors of two partners. The values off the diagonal are the Spearman's

correlation coefficients of the associations between the different social capital factors of two partners.

It shows that the associations between the same social capital factors of two partners are highly significant, and stronger than between the different factors of two partners. The association between friendship social capital of the two partners is quite weak (0.225), while the associations between the two other social capital factors are quite strong (0.563 and 0.464 respectively). The strongest of the three is the correlation between the couples' neighbourhood social capital (0.563). It is consistent with the findings in Figure 7.1.

One should be aware that one of the reasons why the association of neighbourhood social capital is stronger than the associations of the other two social capital factors may be due to the indicators loading highest on neighbourhood social capital. Chapter 5 shows that the indicators loading highest on neighbourhood social capital were the questions about the community safety. They were used to estimate the general social position of the neighbourhood, and the social positions of the potential social contacts of individuals in the neighbourhood. Since couples were very likely to live in the same property and community, their answers to these questions might be similar. Even so, Figure 7.1 shows that their perceptions of the same area may, of course, differ.

The strength of the associations between the friendship social capital of couples and between

the civic participation social capital of them suggests that partners were more likely to influence one another on choosing the civic organisations and activities they engaged in, and the frequencies of participating in the activities, but less likely to influence each other on choosing and contacting the closest friends. Partners may have some shared friends, but it may be very difficult to share the closest friends and establish the same level of the friendship.

Some associations between the different social capital factors of two partners are also significant. For example, the associations between the couples' neighbourhood and civic participation social capital are both highly significant. It suggests that the civic participation of individuals may rely on the general social positions of their neighbourhood. Couples living in a rich neighbourhood may participate in the organisations formed of people in the higher social classes. In contrast, couples living in a deprived neighbourhood may be more likely to engage in civic activities attracting people from the lower social classes. Consequently, couples with higher neighbourhood social capital tended to have the higher level of civic participation social capital. However, the associations between couples' neighbourhood and civic participation social capital are weak.

In addition, the male partner's civic participation social capital had a significant association with all three social capital factors of the female partner. The civic organisations and activities in which men participated probably influenced their female partners' friendship

networks, neighbourhood environment, and the civic organisations in which they were engaged. The influence on women's informal social capital is weaker than on their formal social capital. It suggests that couples were more likely to participate in civic activities together. It is less likely that women formed close friendship with people from their male partners' organisations.

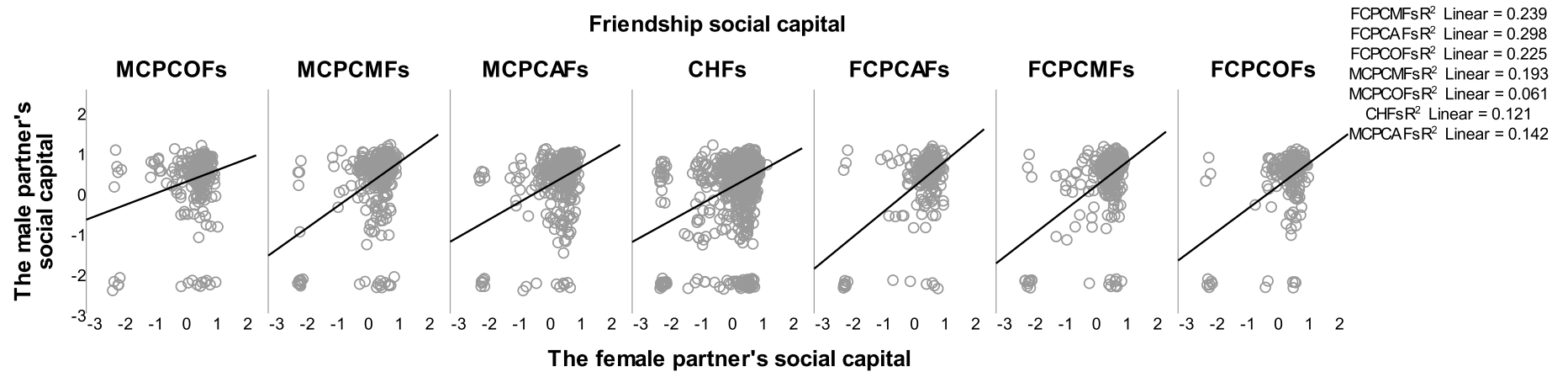
To sum up, partners influence one another significantly on the same social capital factors. There are also some significant associations between couples' different social capital factors. It supports the first hypothesis of this chapter (Section 7.2).

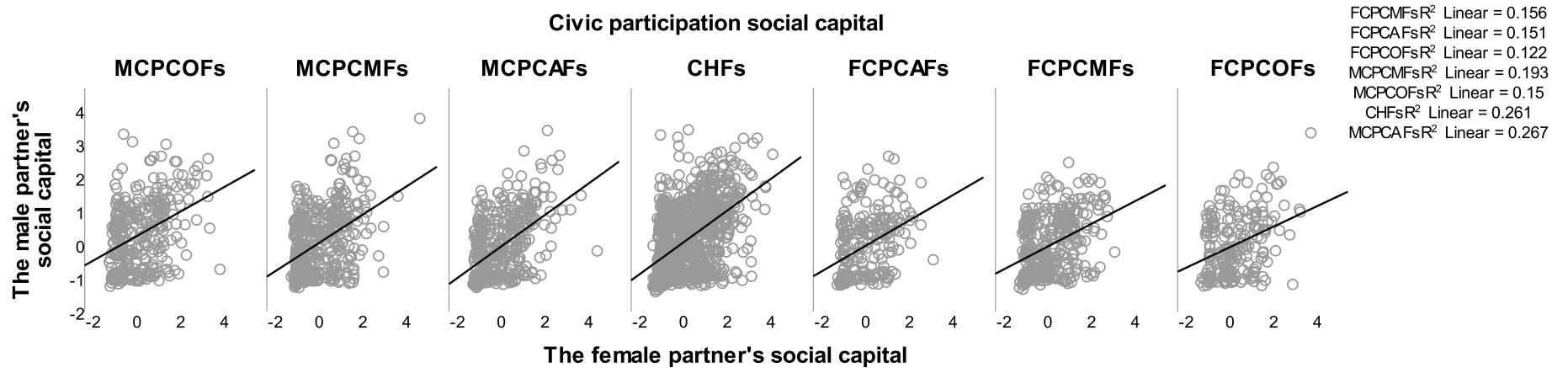
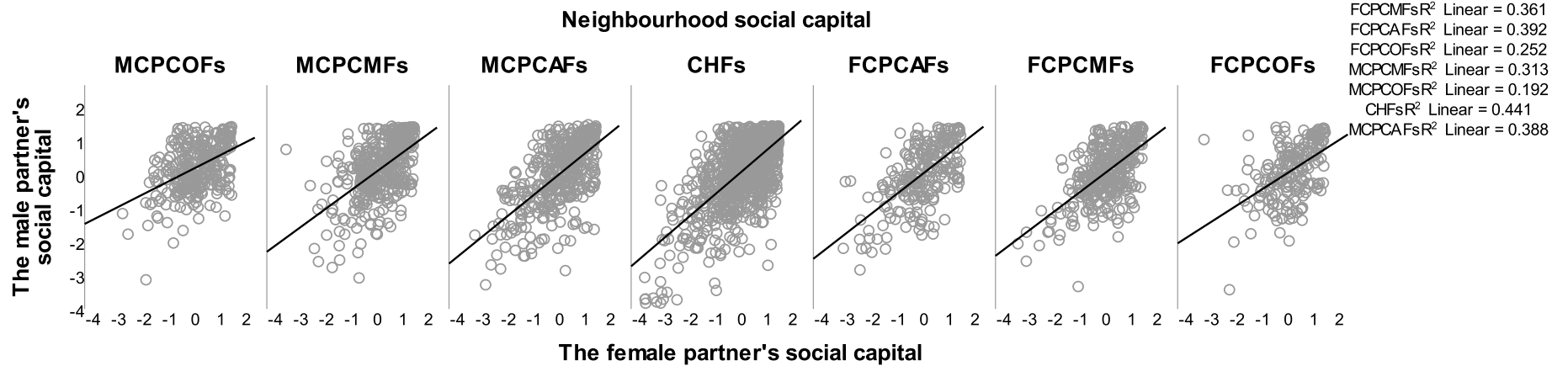
7.5 Social capital mutual influences in cross-class families

In this section, the analyses will look across seven different types of families, by class status, rather than at all families as in the previous section. The first set of analysis is scatterplots for visualising the associations between couples' social capital in seven types of families. Then the second set of analysis is the significance tests of Spearman's correlation coefficient 'rho' for these associations.

Figure 7.2 plots the male partners' social capital against the female partners' social capital in seven types of families for three social capital factors. Each panel indicates one social capital factor. Each column indicates one type of family. The linear regression lines reveal that if

Figure 7.2 Scatterplots of the male and female partner's social capital by family types (measured through the current-job version of the NS-SEC), 2008





Note:

i The most-recent-job version is in Note [1].

Source: BHPS, 1991-2008

there were associations between the social capital of the male and female partners, they were all positive. Namely, with the increase of one partner's social capital, another partner's social capital increases.

The general patterns of the scatterplots for each social capital factor are similar to the corresponding one in Figure 7.1 for all families. The scatterplots for the associations of civic participation social capital have the highest R^2 values compared with that of the associations of the other two types of social capital in corresponding families. It suggests that the associations of couples' neighbourhood social capital are the strongest, while the associations of friendship and civic participation social capital between two partners are relatively weaker.

Table 6.4 shows that in all seven families, couples differed significantly in friendship social capital. However, Figure 7.2 shows that the associations of friendship social capital were not always the weakest. For example, in female-class-predominant class-adjacent families, the associations of friendship social capital were stronger than that of civic participation social capital. In addition, in the case of neighbourhood and civic participation social capital, couples with significantly different social capital did not always have the weakest social capital associations. For instance, class-homogenous couples had significantly different neighbourhood social capital, but the association of neighbourhood social capital between two partners were the strongest compared with that in six types of cross-class families. It

suggests that in the case of social capital, significant differences should not be equivalent to the lack of mutual influences. Similarly, strong within-couple mutual influences (or sharing) do not always result in similarity.

Tables 6.1 and 6.3 reveal that there are significant associations between the occupational classes of individuals and their social capital. If the social capital levels of individuals were only affected by their own occupational levels, the social capital differences in class-homogenous families should be smaller than cross-class families, especially class-opposing families. Families with higher class homogeneity should aggregate around the diagonal closer than families with lower levels of class homogeneity. However, Figure 7.2 shows that the distribution shapes of the circles are similar among the seven types of families. It suggests that the social capital of individuals may be affected not only by their own occupational classes, but also by other factors, such as the partners' social capital or the partners' occupations. The within-couple mutual influences may help to retain the basic patterns of the associations between couples' social capital.

The R^2 values of the regression lines revealed detailed difference among the seven types of families. In the case of neighbourhood social capital, the strength of the couples' social capital associations increased when the social class homogeneity increased. Female-class-predominant couples' friendship social capital associations and male-class-predominant couples' civic participation social capital associations had the same

patterns. If the most-recent-job NS-SEC was used to define family class compositions, both neighbourhood and civic participation social capital had the same pattern except with class-homogenous couples. It suggests that the associations of a couple's social capital may be, to some extent, affected by the class composition of the families. For instance, the more homogenous the occupational classes of couples were, the stronger the associations were between their neighbourhood social capital levels.

Moreover, Table 6.5 shows that with the increase of the social class homogeneity, the homogeneity of civic participation social capital increased. The third panel of Figure 7.2 shows that only in the female-class-predominant families, the strength of the associations of the couples' civic participation social capital increased when the social class homogeneity increased. Probably, the relationship between the couples' formal social capital association and their class homogeneity depended on the factor whether men or women had the higher occupational level in the family. However, if the most-recent-job version NS-SEC was used to define family class compositions, the strength of the associations of cross-class couples' civic participation social capital increased as the social class homogeneity increased. It is more consistent with the relationship between social class homogeneity and formal social capital homogeneity.

Table 7.2 shows the Spearman's Correlation Coefficients of the associations between the male and female partners' three social capital factors in the seven types of families. Similar

to the results in Table 7.1 for all families, the associations between the partners' same social capital factors were all significant.

Some associations between different social capital factors of couples were also significant. For example, in class-homogenous families, the male partner's civic participation social capital significantly correlated with all three social capital factors of the female partner (if the most-recent-job NS-SEC was used, it only correlated with the neighbourhood and civic participation social capital of the female partner). What is more, the formal social capital of the male partner in female-class-predominant class-mixed families significantly correlated with the female partner's friendship social capital. It seems that when women and their male partner were in the same occupation levels, their social networks (especially their neighbourhood networks and civic participation) were influenced by or influenced the male partner's civic participation. Service class women's close friendship networks were influenced by or influenced their intermediate class male partners' civic participation. It is the same as the intermediate women and their working class male partners.

Except in the male-class-predominant class-opposing and female-class-predominant class-mixed families, the male partner's neighbourhood social capital significantly correlated with the female partner's civic participation social capital. Probably women's civic participation, to some extent, reflected the neighbourhood where the families lived. These findings support the first hypothesis that in every type of family, partners, more or less,

Table 7.2 Spearman's correlation coefficients of the associations between the male and female partners' social capital in seven types of families (measured through the current-job version of the NS-SEC), 2008

		Social capital of the female partner					
		MCPFs			FCPFs		
Social capital of the male partner		Friendship social capital	Neighbour- hood social capital	Civic participation social capital	Friendship social capital	Neighbour- hood social capital	Civic participation social capital
<i>COFs</i>							
Friendship social capital		0.130*	-0.012	-0.061	0.196**	0.090	0.019
Neighbourhood social capital		0.017	0.380***	0.097	0.010	0.518***	0.181**
Civic participation social capital		0.020	0.003	0.384***	-0.007	0.117	0.277***
<i>CMFs</i>							
Friendship social capital		0.247***	-0.066	0.055	0.242***	-0.097	-0.060
Neighbourhood social capital		0.068	0.562***	0.137**	-0.007	0.540***	0.092
Civic participation social capital		0.012	-0.026	0.417***	0.123*	0.080	0.386***
<i>CAFs</i>							
Friendship social capital		0.184***	-0.046	0.048	0.229***	-0.028	0.056
Neighbourhood social capital		0.079	0.592***	0.243***	0.076	0.595***	0.191**
Civic participation social capital		0.081	0.188***	0.490***	0.054	0.032	0.428***
		CHF's					
		Friendship social capital	Neighbourhood social capital		Civic participation social capital		
Friendship social capital			0.246***		0.044		0.025
Neighbourhood social capital			0.048		0.603***		0.205***
Civic			0.073*		0.128***		0.530***

Note:

i All tests are two-tailed.

ii *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

iii The most-recent-job version is in Note [2].

Source: BHPS, 1991-2008

influence each other in terms of social capital.

In all seven types of families, the associations between the couples' friendship social capital were the weakest compared with the associations between the neighbourhood social capital of couples and between the civic participation social capital of them. It means that couples may have greater mutual influences on neighbourhood and civic participation social capital than on friendship social capital. It may not be caused by the significant differences of friendship social capital between the two partners (Table 6.4).

In class-homogenous families, couples differ significantly in both friendship and neighbourhood social capital. The association between their friendship social capital levels was much weaker than between their formal social capital levels, but the association between their neighbourhood social capital levels was higher than that. Thus, great within-couple mutual influences may not mean similarity. In addition, the formal social capital associations between male-class-predominant class-mixed couples and female-class-predominant class-adjacent couples are not very strong, but they had similar levels of formal social capital. Therefore, moderate or weak within-couple mutual influences may not mean significant

differences. Hypothesis II has been rejected.

This tendency was not clear in Figure 7.2. The reason for such differences has been explained before. The strength of the associations estimated through the square roots of R^2 values is less reliable than the Spearman's correlation coefficients in Table 7.2. The former are Pearson's correlation coefficients 'r'. This statistic is more appropriate to examine the association between variables with normal distributions. The social capital factors all violated the normality assumption. Thus Spearman's correlation coefficient 'rho' is the more accurate statistic to examine the social capital associations (there are more discussions in Section 7.2).

Figure 7.2 appears to show that the strength of the couples' neighbourhood social capital associations increased when the social class homogeneity increased. Female-class-predominant couples' friendship social capital associations and male-class-predominant couples' civic participation social capital associations had the same patterns. Moreover, Table 6.5 revealed that civic participation homogeneity has a significant and positive relationship with social class homogeneity. These findings are partially consistent with the results in Table 7.2. The couple's social capital associations *all* became stronger as the social class homogeneity increased, except for the associations of friendship social capital between class-mixed couples.

If the most-recent-job version NS-SEC was used, this tendency is not very clear. For example, the strength of civic participation social capital associations increased as the class homogeneity increased, except for male-class-predominant class-mixed couples and same-class couples. In short, in most types of families, there was a positive relationship between the strength of civic participation social capital association and social class homogeneity. Namely, Hypothesis III has been partially proved.

Although the strength of the social capital associations tended to increase as the social class homogeneity increased, the differences of the strength across the seven types of families were not very distinct. The associations between the couples' neighbourhood social capital were all quite strong (r_s values are between 0.518 and 0.603), except for the male-class-predominant class-opposing couples who had a moderate association between their neighbourhood social capital levels ($r_s=0.380$). Male-class-predominant class-adjacent couples and same-class couples had strong associations between their civic participation social capital (r_s values are 0.490 and 0.530 respectively). The formal social capital associations in the other five types of families are moderate (r_s values are between 0.277 and 0.428). In addition, friendship social capital associations are all quite weak (r_s values are between 0.130 and 0.247). It suggests that the relationships between the strength of social capital associations and social class homogeneity levels are not very significant.

It is notable that couples who differ significantly both in social capital and occupational

levels tended to have much weaker social capital associations than couples who were homogeneous in their occupational levels and social capital levels. For example, class-opposing couples differ significantly in civic participation social capital, while class-homogenous couples had similar levels of formal social capital (Table 6.4). The associations between class-opposing couples' civic participation social capital are at moderate levels ($r_s=0.384$ and 0.277), but those between same-class couples are quite strong ($r_s=0.530$).

7.6 Summary

The main research question of this chapter is whether partners in cross-class families influenced one another in terms of social capital. Through the scatterplots and the significance tests of Spearman's correlation coefficients, the associations of couples' social capital in seven types of families are examined. The results show that in class-homogenous families and six types of cross-class families, partners, more or less, influenced each other significantly in terms of social capital. The higher the male partner's social capital was, the higher his female partner's social capital was, and *vice versa*. It is the case even in families where couples differed significantly in terms of both the occupational class and social capital.

Moreover, the findings show that partners who influenced one another significantly and

strongly in social capital did not necessarily have similar levels of social capital. In contrast, partners who influenced each other moderately in social capital did not necessarily have significantly different levels of social capital. Furthermore, as couples' class homogeneity increased, the strength of their social capital association increased (with an exception for the association of friendship social capital of class-mixed couples). If the most-recent job was used to measure family class compositions, the relationship was less clear. In addition, when partners differed significantly in occupational and social capital levels, the associations of corresponding social capital between them were much weaker than those who were homogeneous in both occupational and social capital levels, but such correlations were mostly still present.

It is worth raising two concerns on the possible interpretations of the findings. Firstly, the within-couple mutual influences should be distinguished from 'social capital homogamy'⁴. In Chapter 6, this issue has been examined (more focused on social capital heterogeneity). The mutual influences in this chapter were estimated through the association of social capital between two partners. Even if partners did influence one another significantly in terms of social capital, it does not mean that they have similar levels of social capital. For example, in class-homogenous families and male-class-predominant class-opposing families, the partners' informal social capital levels were different significantly, but also *associated* significantly.

⁴ In Greek, homogamy means two partners have some characteristics alike. Hence, social capital homogamy means two partners have similar levels of social capital.

Secondly, social capital mutual influences should not be used as the evidence of social capital homogamy or social class homogamy without further examination. The theorists of the conventional approach and the dominance approach often use ‘sharing’ as an evidence of social class homogamy. As mentioned in the literature review section above, Goldthorpe used the sharing of ‘reward’ and ‘class fate’ as the evidence of sharing a ‘large area of ... interest’, and further argued that two partners should be assigned the same social class (Goldthorpe, 1983, p.468-470). Erikson used the sharing of ‘conditions’ as the evidence that the class positions of family members should be ‘alike’ (1984, p.502).

In this chapter, I demonstrated that even if partners share some of their social contacts so that their social capital correlated significantly, their social capital could still be significantly different. In other words, sharing may mean association, correlation or mutual influences rather than similarity or equality.

In addition, social capital has not been used as an indicator of the social class. Even if social capital was recognised as an indicator, it may not be the only determinant. It is the same as the determinants such as ‘reward’, ‘class fate’ and ‘conditions’. Without empirical evidence, sharing some of these characteristics is not sufficient to prove the social class homogamy.

This thesis filled in a literature gap. The theorists of the conventional view and the dominance view often use ‘sharing’ as an evidence that the husband and wife are in the same

social classes. They rarely defined the subject which partners shared, and did not use up-to-date data to examine the extent of sharing and the relationship between sharing and social class similarity. This thesis not only examined the relationship between sharing and similarity from a social capital perspective, but also gave a clear definition of social capital and examined the matter with an up-to-date dataset. Therefore, the conclusion of this chapter is based on solid ground.

To summarise, combined with the findings of the last chapter, this chapter found that even if partners were in the same occupational levels, their social capital levels were not necessarily homogenous. In contrast, if partners were in different occupational levels, their social capital levels were not necessarily heterogeneous or independent of mutual influences. It suggests that the occupational levels of individuals may not explain all of the social mutual influences. In the measure of social class, using the occupations of individuals as the only indicator may not be sufficient. It may overlook the social impacts between partners, and the influences of that on the social classes of individuals.

To take into account the mutual influences, one could add social capital or other factors reflecting the results of the within-couple mutual influences into the measure of social class. Alternatively, the characteristics of partners could be included in the measurement as weightings. It is worth finding more empirical evidence on how to incorporate these within-couple mutual social influences into the measure of social class in future research.

In the next chapter, I will examine if the female and the lower-class partner's occupations have any significant impact on their own and their partners' social positions. It is another way of examining the within-couple mutual influences and its effect on measuring the socio-economic positions of individuals.

CHAPTER EIGHT

THE OCCUPATIONS OF THE FEMALE AND LOWER-OCCUPATION PARTNERS MATTER

8.1 Introduction

In the last chapter, I examined the within-couple mutual influences in terms of social capital. It was found that in all seven types of families, partners, to some extent, influenced each other's levels of social capital. The associations between the partners' same social capital factors were all significant. In this chapter, I will further investigate whether the influences were two-way or one-way. Since the contributions of the male partners and the higher-occupation partners' occupations have been widely acknowledged, this chapter focuses on examining whether the occupations of the female partners and the lower-occupation partners had significant influences on their own and/or their partners' social positions (i.e. social capital). It is another way of exploring the within-couple mutual influences. It also demonstrates the importance of an individual's status resources to his or her social position.

Proponents of the conventional and dominance approaches dismissed the contributions of the occupations of either the female partners or the lower-occupation partners when measuring

social classes. They believed that family members share the same social class positions which should be determined only by the male head of household, or the higher-class partner's occupation. Consequently, the occupations of the female partner or the lower-occupation partner were not considered as an indicator of their own and their partner's social class.

The main reason given by these researchers was that the contribution of women's occupations to the estimation of the family social class was empirically not as significant as that of the male partner's occupation (Goldthorpe, 1983). The occupations of the higher-class partners explained the family social class better than that of the lower-occupation partners (Erikson, 1984). These arguments both assume that the husband and wife in all families were class homogenous. This assumption has long been criticised (Acker, 1973; Ritter and Hargens, 1975; Osborn and Morris, 1979; Heath, 1981; Britten and Heath, 1983; Heath and Britten, 1984; Stanworth, 1984; Abbott, 1987).

Another consensus of the conventional and dominance approaches was to exclude the occupations of women or the lower-occupation partners from the measure of their own and their partners' social classes. This chapter focuses on investigating this matter. Some researchers provided empirical evidences against this consensus. They believed that women and the lower-occupation partners' occupations also matter in the measure of the social class (Acker, 1973; Heath and Britten, 1984; Stanworth, 1984; Abbott, 1987; Toomey, 1989;

Hayes and Miller, 1993). One of the most distinguishable oppositions came from the research on cross-class families, which treated the occupations of the male and female partners equally when identifying their social classes (Britten and Heath, 1983).

This chapter will use up-to-date datasets of British society and take the social capital perspective to examine if, in these datasets, the occupations of women and the lower-occupation partners had no significant impact on their own and their partners' social positions (i.e. social capital). Through this examination, one would be able to see the problems in the conventional and dominance approaches, and whether these can be applied without scepticism to the measure of social classes in contemporary British society.

8.2 Literature review

This chapter will examine the research question: whether the occupations of the female and the lower-occupation partners have a significant impact on their own and their partners' social positions, through examining the three approaches to social class measurement, the conventional approach, the dominance approach and the joint-classification approach (i.e. cross-class-family approach). The former two approaches use one of the two partners' occupations as the only indicator of their social classes, while the third approach takes into account the occupations of both partners. More discussion about social class measurement approaches may be found in Chapter 2.

The conventional approach used the occupation of the male head of household to measure the family class. In other words, the male and female partners' social classes are both determined by the occupation of the male head of household. Women's occupations were not taken into account when measuring their own or the male partners' social classes.

Goldthorpe claimed that women's occupations were not stable since they are largely affected by marriage, child-birth and child-rearing. Hence women rarely have a chance to form a career-related class consciousness and action. In addition, he believed that most women depended on their husbands financially, and shared living conditions with their husbands. Therefore, their social classes were determined by their husbands' occupations (Goldthorpe, 1983; 1984). As a result, he only used the occupations of the male head of household to measure the social classes of both the male and female partners.

The evidence Goldthorpe gave to prove that women's life-chances relies on the occupations of their husbands rather than their own occupations is as follows. First, he cited the argument of Parkin that 'for the great majority of women the allocation of social and economic rewards is determined primarily by the position of their families – and in particular, that of the male head' (Parkin, 1971, p.14-15). Second, he cited the argument of Westergaard and Resler that 'it is still men's occupational positions far more than women's that set the essential circumstances of life for most households' (Westergaard and Resler, 1975, p.291). The problem of these two arguments is that they both lack empirical evidence. Therefore, the

reliability of above evidence is questionable.

Thirdly, he provided an empirical work as the most important evidence. He claimed that according to the study of Fox and Goldblatt, ‘mortality rates among married women vary far more sharply with their *husband’s* occupational level than with their own’ (Fox and Goldblatt, 1982, p.31-33). Unfortunately, this is a misinterpretation.

This interpretation is based on the comparison between Tables 3.11 and 3.12 of the original report. The class schemes used to measure the social classes of men and women are different, although first five class categories are the same. In the first table, women’s social classes are collapsed into six categories. In contrast, in the second table, men’s social classes are not collapsed and remained ten categories. It is problematic to make any comparison between these two tables. If men’s social class were collapsed in the same way as that of women, the difference of the variations may be smaller.

Moreover, the first table showed the mortality rates of all married women (aged 15 to 74) by their own classes, while the second table only showed the mortality rates of two types of married women (who were in non-manual skilled occupations and economically inactive) against the social classes of their husbands. By comparing these two tables, one can not conclude whether the mortality rates of *all* married women vary more sharply with their husbands’ classes or their own classes. In short, the above evidence provided by Goldthorpe

is not reliable.

The opponents stated that although women have different career patterns compared with their male counterparts, they have their own 'status resources', such as education, occupation and income. These resources are used as indicators of their social classes before marriage. It is not plausible that the impact of all these resources on their social classes suddenly disappeared once they got married (Acker, 1973).

Researchers also found that women in paid work have higher prestige than the housewives of men in the same occupation (Haavio-Mannila, 1969). It suggests that the influences of their own occupations on social class may be different from the influences of the partners' occupations. Moreover, researchers found that women's occupations affect not only their family income, but also their children's intergenerational occupational mobility patterns and educational attainment (Rosenfeld, 1978; Stevens and Boyd, 1980; Britten and Heath, 1983; Pearson, 1983; Miller and Hayes, 1990). These studies suggest that women's occupations make contributions to the socio-economic positions of their own and probably of the whole family.

Goldthorpe rebutted that even if women's occupations were included in the measure of social classes, it would not make any empirical difference ([1980] 1987, p.281). Two further reasons were given:

‘For despite the general tendency in modern societies for the participation of married women in the labour market to increase, their employment still tends to be more intermittent than that of men, is less often full-time, and is only rarely such as to place them in what could be regarded as dominant class positions relative to those held by their husbands’ (Goldthorpe et al., [1980] 1987, p.281).

Again, no empirical evidence was provided for this argument. According to BHPS in 2008, little has changed. The proportion of married or cohabiting women in full-time employment (33.2 per cent) was still smaller than that of married or cohabiting men (62.3 per cent). Moreover, approximately six in ten married or cohabiting women were in some kind of gainful employment (59 per cent), and approximately seven in ten married or cohabiting men were in gainful employment (68.8 per cent). The difference between these two is not very large (see Note [1]). It is not clear why the contributions of women in part-time but gainful employment to their own social classes were not considered. Part-time workers do not always earn less income and have lower prestige than full-time workers. Furthermore, if part-time male workers could be assigned social class positions according to their occupations, why not part-time female workers?

In addition, Table 4.5 shows that over one in four married and cohabiting families had a female partner with a higher level of occupation than the male partner. In contrast, over one in three married and cohabiting families were male-class-predominant families. The proportion of the former is smaller than that of the latter. However, the difference is not as remarkable as described by Goldthorpe and his colleagues that the employment of married

women ‘only rarely ... could be regarded as dominant class positions relative to those held by their husbands’ ([1980] 1987, p.281).

Goldthorpe and his colleagues added that if women’s social classes were determined by their own occupations, the absolute intergenerational mobility rate of women was ‘radically different’ from the results obtained through the ‘conventional’ approach, while the relative mobility rates were similar ([1980] 1987, p.295). They, then, questioned the ‘validity’ of the individual approach based on the great difference in absolute mobility rates. They further concluded that according to the similarity between two relative mobility rates, ‘studies restricted to the experience of men will *not* in fact prove misleading. Rather, one could use them as a basis for predicting the experience of women with a high degree of confidence’ ([1980] 1987, p.288 and 295).

This chapter will not validate or falsify any social class measurement approach merely based on the difference and similarity between the results generated from the ‘conventional’ approach and the individual approach. If the ‘radical(ly)’ difference could be used to question the validity of the individual approach, it could also be used to question the validity of the ‘conventional’ approach. The difference itself does not reveal which approach is more correct. Moreover, the similarity of the two results may be a ‘safety net’ to the result generated from the ‘conventional’ approach using the specific dataset in a specific year, but it does not justify or generalise the advantage of the ‘conventional’ approach over the

individual approach.

It is notable that even if men's occupations did have a larger impact on women's social classes than women's own occupations, it does not mean women's occupations had no impact at all, nor that the impact was too small to be included in the measure of their own social class. The exponents of the 'conventional' approach did not examine to what extent women had an impact on their class positions, before assuming that women's occupations were not empirically important to the measure of their social classes. They did not clarify how large an impact was enough to be considered, or how to deal with the possibility that the impact of women's occupations was not large but significant. This chapter will examine the significance of the impact of women's occupations on the social positions of their own and their partners. If women's occupations have a weaker but significant impact on their own and their partners' social classes, it may be better to consider both men and women's occupations in the measure of social class rather than only the occupations of men.

The dominance approach used the occupations of the higher-occupation partners to measure the social classes of both partners, and dismissed the occupations of the lower-occupation partners. Erikson, the pioneer of this approach, claimed that women were not always in inferior positions in their families. Some families had female heads of household (i.e. families in which the female partner was in a occupation higher than the male partner). He, then, argued that in families with female heads of household, women's occupations should be

used as the only indicator of the social class. In other words, the higher-occupation partners' occupations were used as the only indicator of their own and their partners' social class (Erikson, 1984).

Although the dominance approach made some modifications on the basis of the conventional approach, the problem is not solved. He did not explain how small the impact of the lower-occupation partners' occupations was or consider whether it was too small to be taken into account. He admitted that 'it is profitable to take the occupations of both husband and wife into account'. However, the class combinations of the husband and wife are 'incomprehensible'. Moreover, it would be better to keep the occupations of the husbands and wives as 'separate entities and deal with them simultaneously via multivariate techniques' (Erikson, 1984, p.512). This implies that due to the technical difficulties, it is the second best choice to use the higher-occupation partners' occupations as the indicators of the social class rather than both partners' occupations. This chapter will explore the contribution of the lower-occupation partners' occupations to the measurement of their own and their partners' social positions in order to emphasise the advantage of the joint-classification approach (i.e. cross-class-family approach). If the joint-classification approach is a better method of measuring the social class compared with the conventional and dominance approaches, it is worth exploring this approach even if it requires more complicated techniques.

Britten and Heath, the pioneers of the joint-classification approach, assigned social classes to families rather than individuals, although both the male and female partners' occupations are taken into account. It is notable that the joint-classification approach is different from the individual approach that social class positions are assigned to individuals. If the joint-classification approach is taken, the social classes of the family members are alike. If the individual approach is taken, family members may have different social class positions.

Similar to the individual approach, this thesis recognises the importance of an individual's occupation to the measure of his or her social class. Besides that, this thesis believes that the joint-classification approach could be expanded to the individual level. Namely, when measuring an individual's social class, one could consider his or her own as well as the partner's occupations. The family class and two partners' social classes may be at different levels. The impact of the husbands' occupations on the wives' social classes may be different from that of the wives' on husbands' social classes. The socio-economic level of a family may be different from the socio-economic level of each family member. By applying different weightings to different indicators, a more accurate measure of social class could be obtained, although how to apply such weightings is outside of the scope of this thesis. Thus, the joint-classification approach examined in this chapter refers to the method which considers both partners' occupations when measuring the social class at the individual level and family level.

This chapter will examine three approaches through the social capital perspective. The reasons for taking the social capital perspective were explained in Chapter 3. In brief, since the measure of social capital in this thesis is about the social resources embedded in an individual's social networks which may help them to find a job or get promoted. For example, people who were not in the high level of occupations, but have a high level of social capital, were more likely to get job-seeking and promotion information, and more likely to get a job or be promoted. Their social status could be estimated through people around them (Chan and Goldthorpe, 2004). Therefore, this thesis uses social capital to estimate the social positions of individuals contrasted with economic positions estimated through the occupations of individuals. By examining the impact of women and the lower-occupation partners' occupations on two partners' social positions (i.e. social capital), it may reveal different results from the economic perspective.

To sum up, the main research question could be divided into three hypotheses corresponding to three approaches:

Hypothesis I (the conventional approach): Only the male partners' occupational levels have a significant impact on their own and their partners' social capital.

Hypothesis II (the dominance approach): Only the higher-class partners' occupational levels have a significant impact on their own and their partners' social capital.

Hypothesis III (the joint-classification approach): Both the male and the female partners' occupational levels have a significant impact on their own and their partners' social capital.

If in class-homogenous families, male-class-predominant families and female-class-predominant families, men and women's occupations had a significant impact on their own social capital, it suggests that women and the lower-occupation partners' occupations were very important to the measure of their own social positions and probably their social class. If in three types of families, men and women's occupations had a significant impact on their partners' social capital, it suggests that in the measure of an individual's social capital, probably the social class, the partner's occupation should be taken into account.

8.3 Methods

In the literature, both basic and advanced statistics have been used to examine the similar matter. Britten and Heath compared the family income, the educational qualification of the husband and wife, the number of children and voting behaviour across different types of cross-class families and class-homogenous families. They presented the contingency tables as evidence which showed that the occupations of women (the mother of 10-year-old children, or women aged 18 and over who were registered on the electoral roll) did have some effects on these class related characteristics (Britten and Heath, 1983).

They continued to make the same argument on the next year. This time, log-linear statistical models are used to analyse the issue. Based on 1979 General Household Survey (GHS), they

found that women's qualifications had an important contribution to predicting their career paths, and their occupations helped to estimate their party identification. Moreover, the occupations of economically active married women had an impact on the family size (Heath and Britten, 1984).

In a more recent study, Rothon examined the General Certificate of Secondary Education examinations (GCSEs) obtained from the Youth Cohort Study (YCS). He found that women's occupations made important contribution to the education achievement of their minority ethnic children (Rothon, 2008).

Outside the Britain, Wright's study examined the datasets from the United States and Sweden. Logistic regression was used to examine the effects of family class composition on class identity. He found that in the United States, women's occupational classes did not make any significant effect on their class identities. However, in Sweden, the effect of women's occupational class was similar to that of their husbands (Wright, 1997, p.239-280).

This chapter will apply both basic and advanced statistics to examine the three hypotheses. More specifically, the multiple bar chart will be used to visualise the impact of two partners' occupations on their own and their partners' social capital. MANOVA will be used to test the significance of the relationship between partners' occupational levels and the combination of three social capital factors (see details below in this section).

In preliminary analyses, there are two sets of multiple bar charts. The first set shows whether in all families women or the lower-occupation partners' occupations made any difference to their own social capital levels compared with the occupations of their partners. The second set shows the same issue in three types of families: male-class-predominant families, class-homogenous families, and female-class-predominant families.

This is different from the previous two chapters in that the analyses in this chapter divide families into three types instead of seven. One reason is that the impact of men and women's occupations may be different, as well as the impact of the higher-occupation partners and the lower-occupation partners. In female-class-predominant families, the influences of women's occupations on their own and their partners' social capital may be not as large as that of men's occupations in male-class-predominant families. Consequently, it is necessary to distinguish the impact of women or the lower-occupation partners' occupational levels in female-class-predominant and male-class-predominant families. The second reason is that if families were divided into seven types, the numbers of cases in each category would not be sufficient for the MANOVA analyses, and the results would be very strange (e.g. men's occupational levels did not have a significant impact on their own social capital which is opposite to the findings of Table 6.3).

The bar charts used in Chapter 6 for presenting the proportions of different types of families are stacked bar charts. The bar charts used in this chapter are different. They are known as

the multiple bar charts. Since the three social capital factors are not normally distributed, the median is the best measure of the average (Field, 2009, p.550). The detailed discussions are in Section 6.3. Hence in this chapter, the multiple bar charts will present the median social capital of individuals. These graphs demonstrate how an individual's median social capital level varies as his or her occupational level varies, or as the partner's occupational level varies. By comparing the median values of social capital vertically and horizontally, the impact of an individual and the partner's occupations can be estimated. These graphs also reveal the differences between the impact of an individual and the partner's occupations.

In the multiple bar charts, the eight-class NS-SEC will be used to measure the social classes of individuals. Since the eight-class version yields a large number of bars and as it is difficult to visualise the patterns, it will be presented in Notes. In the main text, social classes will be collapsed into three groups: managerial and professional occupations (Classes I and II), intermediate occupations (Classes III and IV), and routine and manual occupations (Classes V to VIII). A detailed description of the collapse is in Figure 4.4. The collapse reduces the number of class categories and gives a clearer view of the patterns. It is notable that in order to be consistent with previous chapters, the family class compositions (i.e. male-class-predominant, class-homogenous, and female-class-predominant families) are still determined by eight-class NS-SEC.

The statistical method used in the main analyses is MANOVA. Three social capital factors

will be used as the outcome variables to represent the social positions of individuals. The occupational levels of the two partners and their interaction will be used as explanatory variables. MANOVA is an extension of analysis of variance (ANOVA), where there is more than one outcome variable of interest. ANOVA only allows one outcome variable at a time. If three social capital variables are analysed separately in three ANOVA models, the ‘chance of making a Type I error’ increases, and the relationships between the three social capital factors will not be considered (Field, 2009, p.586). The models of MANOVA explore the associations between one or more explanatory variables and a combination of two or more outcome variables. MANOVA not only controls the Type I error, but also takes into account the relationship between the outcome variables. In addition, compared with multivariate regression and other statistical methods which are suitable for examining this matter, MANOVA is the simplest one, and the results are quite robust. Therefore, MANOVA will be used in this chapter to examine the significance of the impact of the occupations of women and the lower-occupation partners on the social capital levels of them and their partners.

In the main analyses, there are two sets of MANOVA. The first examines the impact of the partners’ occupations on women’s social capital, and the second examines that on men’s social capital. Both sets of analyses are conducted for all families first, then for male-class-predominant, class-homogenous, and female-class-predominant families respectively. In each case, there are four models. The outcome variables are similar: three social capital factors. The explanatory variables are different. Four models are as followed:

Model 1: The occupational levels of individuals

Model 2: The occupational levels of partners

Model 3: Model 1 + Model 2

Model 4: Model 3 + (The occupational levels of individuals \times The occupational levels of their partners)

The first two models are designed to examine the main effects of an individual's or the partner's occupational level on an individual's own social capital. The third model shows the effect of an individual's own occupational level on his or her social capital after controlling for the effect of the partner's occupational level. It also demonstrates the effect of the partner's occupational level after controlling for the effect of an individual's own occupational level. If the main effect was significant in model 1 or 2, but in model 3 or 4 it became non-significant, it means that the significance of the main effect was illusory. The fourth model shows whether the contributions of an individual and the partner's occupational levels remain significant after controlling for the effect of the interaction. If the two explanatory variables both had significant effects on the outcome variable in model 3, but in model 4 the first of them became non-significant and the interaction term was significant. It means that the first explanatory variable affected the outcome variable indirectly through the second explanatory variable.

The statistics of MANOVA presented are Wilks's lambda (Λ), the F-ratio, the hypothesis degree of freedom and the error degree of freedom. The power of Wilks's lambda (Λ) is stronger than the Hotelling-Lawley trace (T^2) and Roy's largest root (Θ), because 'groups

differ along more than one variate' (Field, 2009, p.604). It is notable that the multivariate normality assumptions are violated in all MANOVA models. Although both Wilks's lambda (Λ) and Pillai-Bartlett trace (V) are quite robust to this violation, Wilks's lambda (Λ) is relatively more robust when sample sizes are unequal (Field, 2009, p.603 and 605). In addition, the explanatory variables (i.e. the occupational levels of individuals and their partners) in all models have more than two categories. Thus, Wilks's lambda (Λ) is the most appropriate test statistic to present. The range of Wilks's lambda (Λ) is between 0 and 1. The smaller value of Wilks's lambda (Λ), the larger differences 'between groups of the centroid (vector) of means on the independent variables', and 'the more given effect contributes to the model' (Garson, [2006, 2008] 2009).

MANOVA

The F-ratio is the test statistic of F test which examines if the effect of each explanation variable (i.e. the occupational levels of individuals and their partners and the interaction) is significant. The F-ratio shows 'how much of the model has improved the prediction of the outcome compared with the level of inaccuracy of the model'. It is obtained through dividing the value of systematic variance by the value of unsystematic variance for all three social capital factors (i.e. dependent variables) (Field, 2009, p.203 and 590). The F-ratio should be larger than 1, which means the model is good. The larger the F-ratio, the larger the improvement the model made in the prediction of the

outcome variables.

The asterisks alongside the F-ratio indicate the significant level of the effect by the explanatory variables. It is generated from the F-ratio as well as the hypothesis and the error degrees of freedom presented in the columns on the right of the F-ratio. If the F-ratio is marked with one to three asterisks, the explanatory variable had significant contribution to the prediction of the outcome variables as a whole. Due to the violation of multivariate normality assumptions, the marginally significant effects ($p < 0.05$) should be interpreted with caution.

8.4 Preliminary analyses

This section examines the impact of women and the lower-occupation partners' occupations on their own and their partners' social capital. The first part is multiple bar charts for all families. It gives an overview of the importance of women and the lower-occupation partners' occupations. The second part is the same type of bar chart for three different types of families. It shows how the patterns change as the family class combinations change.

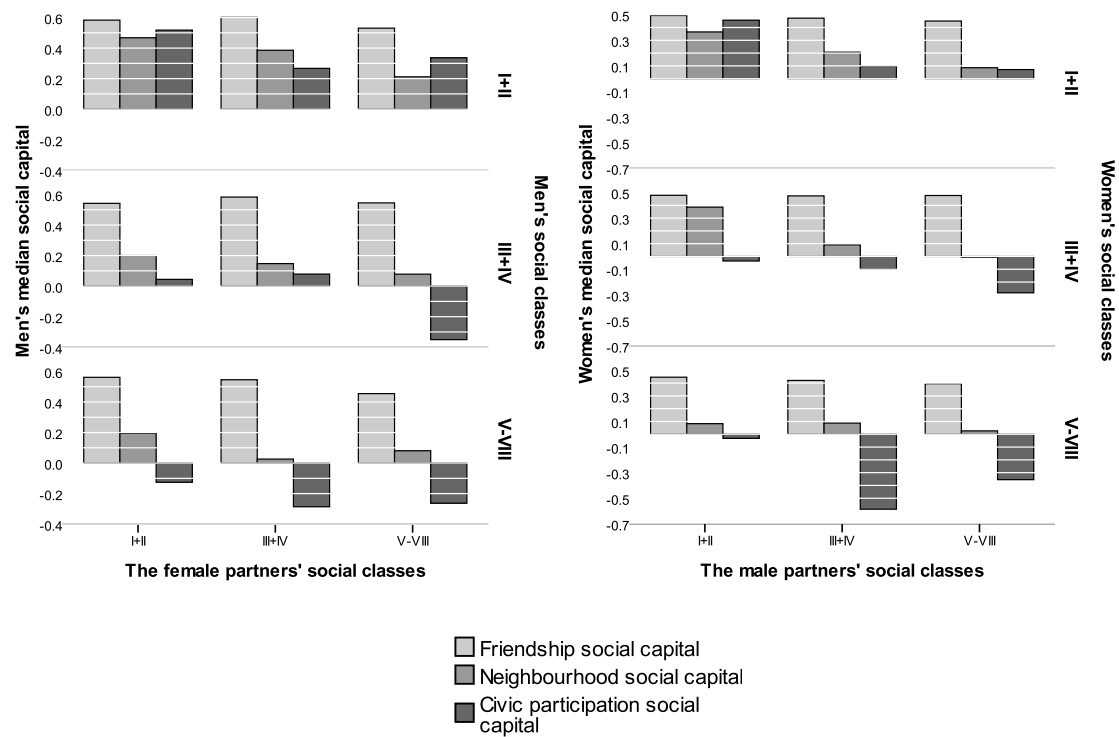
8.4.1 The importance of women and the lower-occupation partners' occupations in all families

Figure 8.1 contains two sets of bar charts. The left shows the effects of the male and female

partners' occupations (in three occupational groups) on men's median social capital. The right shows those effects on women's median social capital. Three social capital factors are marked with different gray scales. These two bar charts allow the comparisons between the effects of the male and female partners' occupations, and between the effects of the higher-class and lower-class partners' occupations.

Generally speaking, it seems that the effects of men and women's occupations on their own and their partners' median friendship social capital were not as great as that on median neighbourhood and civic participation social capital. One reason might be that the range of friendship social capital is much narrower than that of neighbourhood and civic participation social capital (Table 5.3). Another reason might be that some factors have greater effects on the variation of an individual's friendship social capital than the occupations of couples, for example, the gender factor. In the same type of families, men's median friendship social capital tended to be higher than women's. It suggests that gender may be an important factor in estimating an individual's friendship social capital. The gender effect is so significant that it is still distinct after controlling for the occupations of individuals and their partners.

Figure 8.1 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex, 2008



Note:

i The most-recent-job version is in Note [2].

ii The multiple bar charts using eight-class NS-SEC are in Notes [3] and [4].

Source: BHPS, 1991-2008

The right bar chart reveals the impact of women's occupations on their own social capital, as well as the impact of men's occupations on women's social capital. The effects of women's occupations on their median friendship social capital were not very clear in this bar chart. It seems that whether women work in working class occupations or not had an impact on their median friendship social capital. In contrast, the effects of the male partners' occupations were very small. For instance, the median values of working class women's friendship social capital were slightly lower than that of non-working class women's. The median values of service class women's friendship social capital were similar to that of intermediate class

women's even if their male partners' occupations were different.

Men and women's occupations had relatively greater effects on women's median neighbourhood and civic participation social capital than on friendship social capital. Non-working class women with service class male partners tended to have higher median neighbourhood social capital than working class women with service class male partners. Non-service class women with non-service class male partners tended to have a higher level of median neighbourhood social capital than service class women with non-service class male partners. It suggests that whether women with non-service class male partners were in the service class themselves or not had a large impact on women's median neighbourhood social capital. Another important factor is whether women with service class male partners were in the working class themselves or not.

In general, the effects of men's occupations on their female partners' median neighbourhood social capital had a relatively clearer linear tendency. The higher the occupations the men with non-working class female partners were in, the higher the median neighbourhood social capital the female partner had. The female partners of non-working class men had a slightly higher median neighbourhood social capital than the female partners of working class men. However, the effects of working class men's occupations on their partners' median neighbourhood social capital were not obvious.

The influences of men's occupations on their partners' median civic participation social capital depended on whether the male partners were in the service classes. If they were in the service class, women in non-working class occupations had a slightly higher levels of median civic participation social capital than women in working class occupations. If they were not in the service classes, the higher the occupations women were in, the higher the median civic participation social capital they had. In addition, whether women with non-intermediate class male partners were in the service class themselves matters to their own median civic participation social capital. Another important factor is whether women with intermediate class male partners were in the working class themselves.

What is more, the men with non-working class female partners, the higher their occupational levels were, the higher the median civic participation social capital their female partners had. The occupations of men with working class female partners had a non-linear impact on their female partners' median civic participation social capital. In this case, working class women with service class male partners had a higher level of median civic participation social capital than working class women with working class male partners, and in turn higher than those with intermediate class male partners. In one word, the impact of women's occupations on their own median neighbourhood social capital and median civic participation social capital was not weaker than that of men's occupations.

The left bar chart reveals the impact of women's occupations on their male partners' median

social capital. It could be compared with the impact of men's occupations on their own median social capital. It seems that the impact of women's occupations on their male partners' median social capital was slightly weaker than the impact of that on their own median social capital. Non-working class men with intermediate class female partners had a slightly higher median friendship social capital than that of those with non-intermediate class female partners. Men in the service class with working class female partners had a lower median friendship social capital than that of those with non-working class female partners. Men in the intermediate class with non-intermediate class female partners had a similar median friendship social capital. The median values of friendship social capital of working class men were higher if their female partners had a higher level of occupation. Generally speaking, the median values of friendship social capital of men with working class female partners were lower than that of those with non-working class female partners.

The impact of men's occupations on their own median friendship social capital was also not obvious. The median friendship social capital of men in the working class tended to be lower than that of those in non-working class if their female partners were in the same class (the only exception is that of those with service class female partners). The median friendship social capital of men in working-class class-homogenous families was the lowest compared with that of men in other types of families.

The impact of men's own occupations on their own median neighbourhood social capital was

more obvious. The higher the occupations they had, the higher the median neighbourhood social capital they had. Women's occupations also had an impact on their male partners' median neighbourhood social capital. Men in non-working classes had a higher median neighbourhood social capital if the occupations of their female partners were higher. The same linear pattern was found in the case of working class men with non-working class female partners. The median values of neighbourhood social capital of working class men with working class female partners were slightly higher than that of those with intermediate class female partners. If men were in the non-service classes, while their female partners were in non-intermediate classes, their median values of neighbourhood social capital were similar.

It seems that it had a large influence on men's median civic participation social capital if their female partners were in the working class. The median values of civic participation social capital of men with service class female partners had a higher median civic participation social capital than that of those with working class female partners. The median values of civic participation social capital of men in non-intermediate classes with intermediate class female partners were lower than that of those with female partners in non-intermediate classes. Intermediate class men with intermediate class female partners had a higher median civic participation social capital than that of those with non-intermediate class female partners.

The higher the levels of occupations men had, the higher the median civic participation social capital they had. The only exception is that the intermediate class men with working class female partners who had a lower median civic participation social capital than that of those with working class female partners. It seems that the impact of men's occupations on their own median civic participation social capital was greater than that of their female partners' occupations.

In the case of the most-recent-job version, the impact of men and women's occupations on their own and their partners' median social capital had clearer linear patterns. The higher the levels of occupations women or men had, the higher the median social capital they or their partners had. There are few exceptions. The median values of friendship social capital of men and women in the service class were similar to that of their counterparts in an intermediate class. Working class women with non-working class male partners had a similar median neighbourhood social capital. Intermediate class men with intermediate class female partners had a similar median neighbourhood social capital than that of those with service class female partners.

The impact of the lower-occupation partners' occupations on their own and their partners' median social capital was not always weaker than the impact of the higher-occupation partners' occupations. Sometimes the former even had a greater impact. For example, when the female partners were in a lower occupational group than the male partners, the impact of

their occupations on their own median neighbourhood social capital was greater than the impact of men's occupations. In addition, the effects of women's occupations on their male partners' median informal social capital were slightly greater than that of men's occupations.

When the male partners had a lower level of occupation than the female partners, the impact of men's occupations on their own median friendship social capital and median civic participation social capital was similar to the impact of their female partners' occupations. The impact of men's occupations on their female partners' median informal social capital was similar to that of their female partners' occupations. If the most-recent job was used to define occupational groups, men's occupations had a greater impact on their own median friendship social capital and median civic participation social capital than the impact of their female partners' occupations.

In short, the effects of women's occupations on their own median social capital were not weaker than the effects of men's occupations, although the effects on men's median social capital, especially civic participation social capital, were weaker than that of men's own occupations. In the case using the most-recent jobs, the only difference is that the effects of women's occupations on their own median social capital were stronger than the effects of men's occupations.

The impact of the lower-occupation partners' occupations on their own median social capital

was similar to that of the higher-occupation partners' occupations. In contrast, the impact of the lower-occupation partners' occupations on the higher-occupation partners' median informal social capital was similar to that of the higher-occupation partners' occupations, but that on the higher-occupation partners' median formal social capital was weaker.

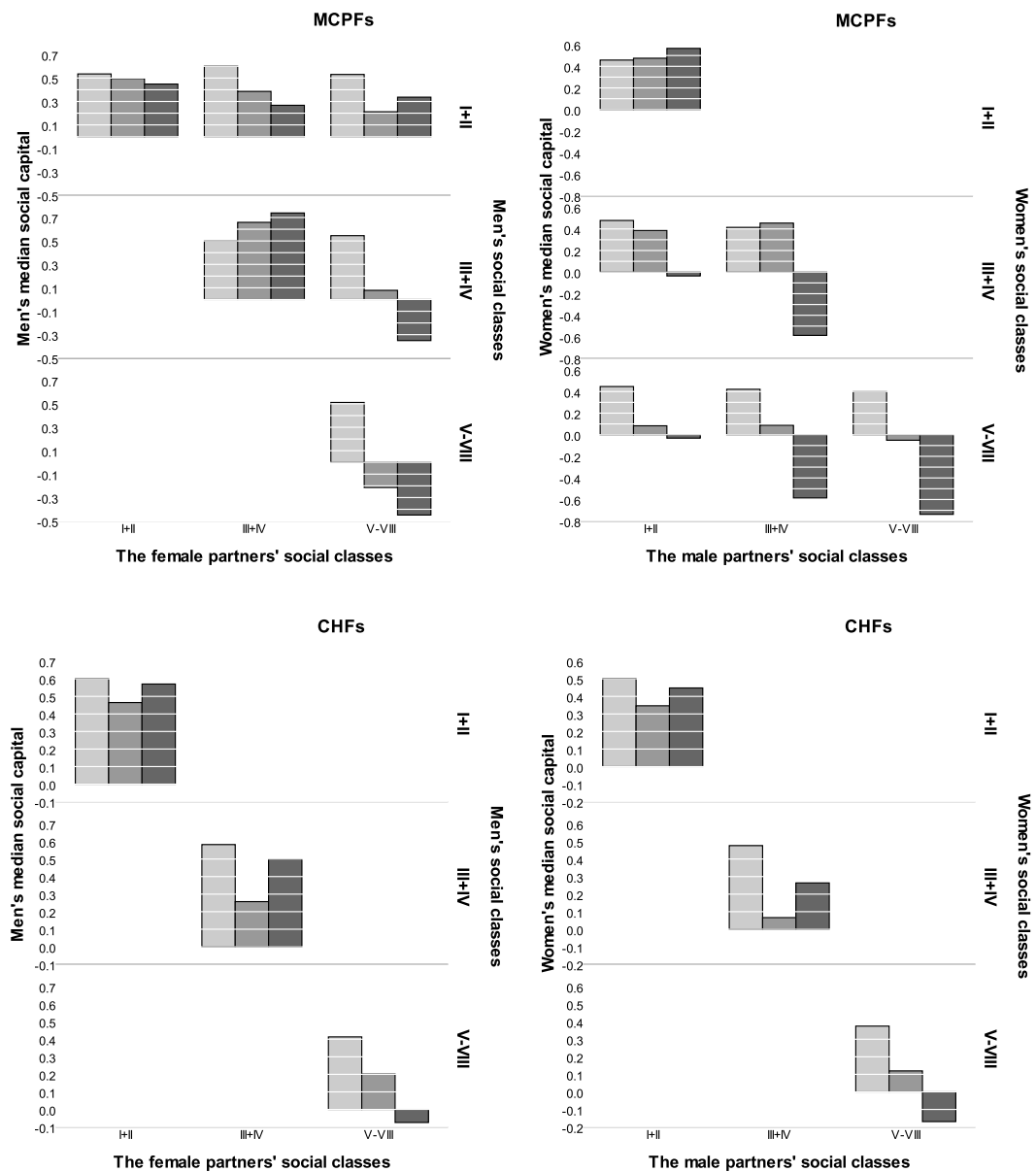
8.4.2 The importance of women and the lower-occupation partners' occupations in three types of families

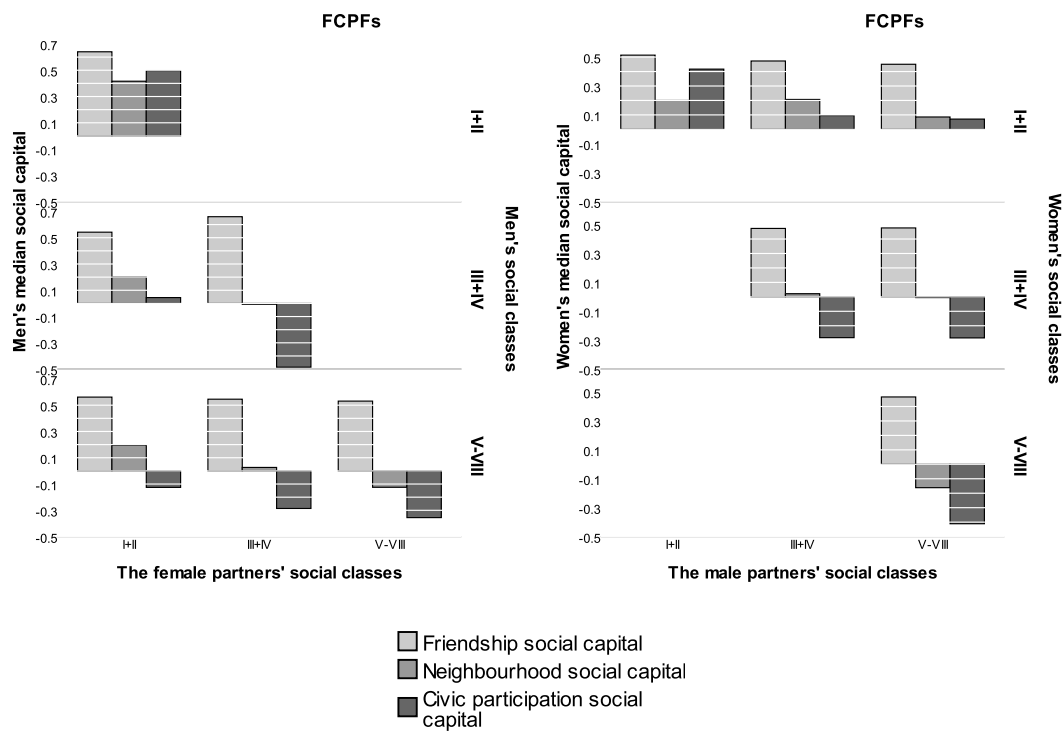
Figure 8.2 contains three pairs of bar charts for male-class-predominant families, class-homogenous families, and female-class-predominant families respectively. The left column shows the multiple bar charts which illustrate the impact of men and women's occupations on men's three social capital factors. The right column illustrates the influence of men and women's occupations on women's three social capital factors. Compared with the bar charts for all families in preliminary analyses, Figure 8.2 reveals more clearly how the occupations of the lower-occupation partners affect the social capital of them and their partners in families of which the lower-occupation partners were male and that were female.

The conventional view and the dominance approach choose different indicators to measure the social class of female-class-predominant families. The former choose the occupation of the male partner, while the latter choose the occupation of the female partner. By dividing families into three groups, Figure 8.2 allows the investigation that the occupation of which

partner had a weaker impact on the social capital of two partners in cross-class families, and whether it is so weak that it could be ignored when estimating the social positions of two partners.

Figure 8.2 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class current-job version of the NS-SEC), 2008





Note:

i Eight-class version is used to defined male-class-predominant families, female-class-predominant families and class-homogenous families. In the bar charts, the social classes of individuals are collapsed into three categories. The forward diagonals of two types of cross-class families are class-adjacent families.

ii The most-recent-job version is in Note [5].

iii The multiple bar charts using eight-class NS-SEC are in Notes [6] and [7].

Source: BHPS, 1991-2008

In general, the impact of women's occupations on the friendship social capital of two partners was not obvious. The variations of neighbourhood social capital and civic participation social capital were clearer. The impact of men's occupations on the friendship social capital of two partners had the same pattern. So the following discussion will focus on comparing the impact of men's occupations on the neighbourhood and civic participation social capital of two partners with that of women.

The upper right bar chart shows that in male-class-predominant families the impact of women's occupations on their own social capital was not always weaker, sometimes even stronger, than that of their male partners' occupations. Women's occupations had a significantly larger impact on their own median neighbourhood social capital than their male partners' occupations. Whatever occupational group the male partners were in, women's median neighbourhood social capital increased as their occupational level increased. However, women with the male partners in the higher occupational levels did not always have higher median neighbourhood social capital than women with the male partners in lower occupational levels.

The impact of women's occupations on their own civic participation social capital was not as great as that of their male partners' occupations. The lower the level of occupations the male partners had, the lower the median civic participation social capital women had. Service class women had a significantly higher median civic participation social capital than non-service class women. Intermediate class women had similar levels of median civic participation social capital as working class women, if their male partners were in the same occupational groups.

If the most-recent-job version NS-SEC was used to define the social class, women's occupations had a larger impact on their civic participation social capital than their male partners' occupations. The higher the level of occupations women had, the higher the median

civic participation social capital they had.

The upper left bar chart shows that in male-class-predominant families, women's occupations had an obvious impact on their male partners' social capital. It was not much weaker than the impact of men's own occupations. The higher the level of occupations women had, the higher the median neighbourhood social capital their male partners had. Men with working class female partners had a higher median neighbourhood social capital if they had a higher level of occupation. On the contrary, men with intermediate class female partners had a lower median neighbourhood social capital if they had a higher level of occupation.

The impact of women's occupations on the median civic participation social capital of their male partners was distinct. The higher the level of occupation women had, the higher the median civic participation social capital their male partners had, except women in the intermediate class with service class male partners. It is similar to men's neighbourhood social capital as above, if men with working class female partners had a higher level of occupation, they tended to have a higher level of median civic participation social capital. The opposite was true for men with intermediate class female partners. If the most-recent-job version NS-SEC was used, the pattern has a clearer linear feature. The higher level of occupation men or the female partners had, the higher the median civic participation social capital men had.

The lower right bar chart shows that in female-class-predominant families, women's occupations had a greater impact on their neighbourhood and civic participation social capital than that of their male partners' occupations. The opposite was true if the most-recent-job version NS-SEC was applied. However, in this case, the impact of women's occupations was still quite large.

More specifically, the higher the level of occupations women had, the higher the levels of median neighbourhood social capital and civic participation social capital they had. As the increase of the occupations of male partners increased, women's median neighbourhood social capital remained at a similar level. If the most recent job was used, the impact of men's occupations on women's median neighbourhood and civic participation social capital increased. In this case, the higher the level of occupation the male partners had the higher the median neighbourhood social capital and civic participation social capital women had.

The lower left bar chart reveals that in female-class-predominant families, the impact of women's occupations on their male partners' social capital was not weaker than that of their male partners' own occupations. The higher the level of occupations women had, the higher the levels of median neighbourhood social capital their male partners had. The median neighbourhood social capital of intermediate class men is similar to that of working class men. If the most-recent-job version NS-SEC was used instead of the current-job version, the impact of women's occupations on their male partners' neighbourhood social capital was

weaker than that of their male partners' own occupations, but the impact was still quite large.

Women and their male partners' occupations both had large effects on men's median civic participation social capital. The higher level of occupations the women or their male partners had, the higher the levels of median civic participation social capital men had.

To sum up, Figure 8.2 illustrates that in male-class-predominant families and female-class-predominant families, women and the lower-occupation partners' occupations had a large impact on the neighbourhood and civic participation social capital of them and their partner. In most cases, women and men's occupations, or the lower-occupation and higher-occupation partners' occupations had a similar degree of impact. On specific social capital, the effects may be at different degrees. For example, women's occupations had a greater impact on their median neighbourhood social capital than men's occupations. However, men's occupations had a greater impact on women's median civic participation social capital than women's occupations. It suggests that women and the lower-occupation partners' occupations may be as important as men and the higher-occupation partners' occupations to the estimation of their own and their partners' social position. Further analyses are needed to find out whether the impact was significant or not. It will be the focus of the following sections.

8.5 The significance of the impact of the female and lower-occupation partners' occupations on their own and their partners' social capital

This section contains three sections. The first two sections contain two sets of MANOVA analyses. They explore whether women's occupations had a significant impact on the social capital of them and their partners. The third section which is based on the same sets of MANOVA analyses investigates whether the lower-occupation partners' occupations had a significant impact on the social capital of them and their partners.

8.5.1 The significance of the impact of women's occupations on their social capital

Table 8.1 examines the significance of the impact of women's occupational class on their social capital in all families, and three types of families respectively. For each type of family, there are four models. As explained in Section 8.3, the first two models contain one explanatory variable each. The first model verifies whether the relationship between women's occupational classes and their social capital was significant. The second model examines the significance of the relationship between the male partners' occupational classes and women's social capital. The third contains both explanatory variables in the first two models. It explores whether the main effect or the relationship in Model 1 was real by controlling for the impact of the male partners' occupational classes. It also shows the

significance of the main effect in Model 2 after controlling for the impact of women's occupational classes. The fourth model examines whether the main effects in Models 1 and 2 were conditional by entering the interaction term.

Model 1 for all families shows that there was a significant relationship between women's occupational classes and their own social capital. It remains significant when it controlled for the male partners' occupational classes. It means that the relationship between women's occupational classes and their own social capital was not spurious. Model 4 adds in the interaction term which was significant at a marginal level ($p < 0.05$). Since the distributions of social capital factors are not normal, marginal significance may not be reliable. However, Figure 8.1 shows that in all families, the impact of men and women's occupations on women's social capital was interdependent. For example, the occupations of men with an intermediate class female partner had large influences on women's median neighbourhood social capital, while the occupation of men with a working class female partner had quite a small impact. In addition, the difference between the median neighbourhood participation social capital of women in the intermediate class and working class were quite large if their male partners were in the service class, but the difference almost disappears if their male partners were in the intermediate class. Therefore, the interaction term may indeed be significant. If the most-recent-job NS-SEC was used, the interaction term was not significant.

Models 1 and 3 for male-class-predominant families show that women's occupational classes had a significant effect on their own social capital, and the effect was real. It is notable that in Model 1 when there was only one main effect in the model, the significance level was very high, but in Model 3 the significance level reduced to the marginal level. It suggests that the significant relationship between women's occupational classes and their social capital may be spurious. According to Figure 8.2, in this type of family, the impact of women's occupations on their social capital was not very large, but not weaker than that of men's occupations. For example, the median civic participation social capital of intermediate class women was similar to that of working class women, but their median values of neighbourhood social capital were very different. In contrast, the impact of the occupations of men in non-working classes on women's median neighbourhood social capital was also quite small. Consequently, it is possible that the relationship between women's occupational classes and their social capital was real.

Models for female-class-predominant families reveal that women's occupational classes had a very significant impact on their social capital, and the impact was independent from the impact of men's occupational classes. If the most-recent-job NS-SEC was used, women's occupational classes had a more significant impact on their social capital than men's occupational classes.

In brief, women's occupations were important in predicting their social capital. The

Table 8.1 MANOVA for the effects of own social classes and the male partners' social classes on women's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the current-job version of the NS-SEC), 2008

	Women's social capital															
	Model 1				Model 2				Model 3				Model 4			
	Λ^i	F	df _H ⁱⁱ	df _E ⁱⁱ	Λ	F	df _H	df _E	Λ	F	df _H	df _E	Λ	F	df _H	df _E
<i>All families</i>																
Women's social classes	0.931	11.645***	21	9640					0.956	7.215***	21	9525	0.965	5.499***	21	9384
Men's social classes					0.919	13.709***	21	9652	0.945	9.101***	21	9525	0.971	4.625***	21	9384
Women's social classes class*Men's social classes													0.954	1.059*	147	9796
<i>MCPFs</i>																
Women's social classes	0.919	6.015***	18	3567					0.973	1.930*	18	3761	0.984	1.137	18	3508
Men's social classes					0.887	8.569***	18	3567	0.939	4.422***	18	3550	0.932	4.939***	18	3508
Women's social classes class*Men's social classes													0.960	1.142	45	3685
<i>CHFs</i>																
Women's social classes=Men's social classes	0.890	6.600***	21	3340	-	-	-	-	-	-	-	-	-	-	-	-
<i>FCPFs</i>																
Women's social classes	0.933	3.467***	18	2495					0.935	3.331***	18	2478	0.944	2.800***	18	2436
Men's social classes					0.939	3.107***	18	2495	0.941	2.974***	18	2478	0.934	3.321***	18	2436

Women's social classes					
class*Men's social classes	0.934	1.329	45	2559	

Note:

i Λ : Wilks' lambda.

ii df_H : hypothesis degree of freedom; df_E : error degree of freedom.

iii *: $p < 0.05$, ***: $p < 0.001$.

iv The most-recent-job version is in Note [8].

Source: BHPS, 1991-2008

contribution was significant, although it is interdependent with men's occupational classes. In the case using the most-recent-job version NS-SEC, the interdependence disappeared. As a result, women's occupational class had an independent and significant impact on their own social capital. In both two types of cross-class families, women's occupational classes had a significant impact on their social capital, and the impact was independent from the impact of men's occupational classes. In male-class-predominant families, although the impact of women's occupational classes was significant at marginal level, it was not weaker than the impact of men's occupational classes. Therefore, it is problematic to exclude women's occupations when estimating their social positions (i.e. social capital). It may also be problematic to exclude them when estimating their socio-economic positions (i.e. social class).

Table 8.2 examines whether women and men's occupational classes had a significant impact on men's social capital. Similar to Table 8.1, it contains MANOVA analyses for all families, and then divides it into three types of families. Through the four models for each type of family, it demonstrates whether the impact of women's occupational classes on their male partners' social capital was significant, real and independent from the impact of men's occupational classes.

The first panel shows that in all families women's occupational classes had a significant impact on their male partners' social capital (Model 2), and the impact was not spurious

8.5.2 The significance of the impact of women's occupations on their male partners' social capital

Table 8.2 MANOVA for the effects of own social classes and the female partners' social classes on men's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the current-job version of the NS-SEC), 2008

	Men's social capital															
	Model 1				Model 2				Model 3				Model 4			
	Λ^i	F	df _H ⁱⁱ	df _E ⁱⁱ	Λ	F	df _H	df _E	Λ	F	df _H	df _E	Λ	F	df _H	df _E
<i>All families</i>																
Men's social classes	0.896	17.675***	21	9531					0.920	13.143***	21	9382	0.955	7.119***	21	9241
Women's social classes					0.957	7.030***	21	9479	0.982	2.787***	21	9382	0.984	2.485***	21	9241
Men's social classes class*Women's social classes													0.956	0.986	147	9646
<i>MCPFs</i>																
Men's social classes	0.865	10.175***	18	3494					0.913	6.352***	18	3477	0.907	6.699***	18	3434
Women's social classes					0.933	4.830***	18	3494	0.984	1.132	18	3477	0.982	1.196	18	3434
Men's social classes class*Women's social classes													0.946	1.502*	45	3607
<i>CHFs</i>																
Men's social classes=Women's social classes	0.909	5.403***	21	3377	-	-	-	-	-	-	-	-	-	-	-	-

<i>FCPFs</i>																
Men's social classes	0.906	4.710***	18	2391				0.921	3.871***	18	2374	0.937	3.033***	18	2331	
Women's social classes					0.949	2.486***	18	2391	0.965	1.676*	18	2374	0.978	1.027	18	2331
Men's social classes																
class*Women's social classes													0.958	0.801	45	2449

Note:

i Λ : Wilks' lambda.

ii df_H : hypothesis degree of freedom; df_E : error degree of freedom.

iii *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

iv The most-recent-job version is in Note [9].

Source: BHPS, 1991-2008

(Model 3). Moreover, the impact was independent from the influences of men's own occupational classes, because the interaction term in Model 4 was not significant.

In male-class-predominant families, the relationship between women's occupational classes and men's social capital was significant if women's occupational classes were the only main effect entered into the model (Model 2). Once men's occupational classes were entered into the model as well, the relationship became not significant (Model 3). It suggests that the relationship between women's occupational classes and their male partners' social capital was spurious. Model 4 reveals that the interaction of men's and women's occupational classes was significant, as well as men's occupational classes. Women's occupational classes remain non-significant. It means that although women's occupational classes did not have a significant impact on their male partners' social capital, the former influences the latter indirectly through men's occupational classes. In other words, the significant relationship between men's occupational classes and their own social capital depended on their female partners' occupational classes. For example, in Figure 8.2, men with working class female partners had a greater impact on their own median neighbourhood and civic participation social capital than men with intermediate class female partners. If the most-recent-job version NS-SEC was used, the relationship between women's occupational classes and their male partners' social capital was significant but not real. Women's occupational classes even had no indirect impact on their male partners' social capital through men's occupational classes.

In female-class-predominant families, the relationship between women's occupational classes and their male partners' social capital was significant (Model 2) and real (Model 3), but the significant level was marginal. Figure 8.2 shows that women's occupational classes had a large impact on men's social capital. For example, the impact of women's occupations on working class men's median neighbourhood social capital was larger than that of the occupations of men with service class female partners. The impact of women's occupations on intermediate class men's civic participation social capital was larger than that of the occupations of men with intermediate class female partners. Thus, the impact of women's occupational classes on their male partners' social capital was very likely to be significant. If the most-recent-job NS-SEC was used, the significant level increased.

To sum up, women's occupational classes had significant and independent influences on estimating their male partners' social capital. The only exception is male-class-predominant families. In this type of family, women's occupational classes had indirect influences on men's social capital through their male partners' occupational classes. However, if the most-recent-job NS-SEC was used to define the occupational classes of individuals, the indirect influence disappeared.

8.5.3 The significance of the impact of the lower-occupation partners' occupations on their own and their partners' social capital

The above two tables (Tables 8.1 and 8.2) also demonstrate whether the impact of the lower-occupation partners' occupations on the social capital of them and their partners was significant. In male-class-predominant families, the lower-occupation partner is the female partner. Therefore, the findings about the lower-occupation partner are the same as that discussed in corresponding parts of the Sections 8.5.1 and 8.5.2. Women's occupational classes had a significant impact on their own social capital, but the impact on their partners' social capital was indirect through their partners' occupational classes. If the most-recent-job NS-SEC was used, the indirect impact disappeared.

In female-class-predominant families, the male partner is the lower-occupation partner. Tables 8.1 and 8.2 show that the occupational classes of men had a significant impact on the social capital of them and their partners. The impact on their own social capital was significant at a marginal level. Figure 8.2 shows that the differences of median neighbourhood social capital of men in the intermediate class and working class were not obvious, but the differences of that between men in the service class and non-service class were quite large. In addition, the occupations of men with a service class female partner had a larger impact on their own median civic participation social capital than the impact of the occupations of women with a working class male partner on their male partners' median civic participation social capital.

It suggested that it was very likely that there was a significant relationship between men's occupational classes and their own social capital. If the most-recent-job version NS-SEC was used, the significance of this relationship increased, but the impact of men's occupational classes on their female partners' social capital became significant at marginal level. Figure n.8.4 (Note [5]) showed that the influences of men's occupations on their female partners' median neighbourhood and civic participation social capital was quite clear, although it seems weaker than the impact of women's own occupations.

In short, in two types of cross-class families, the lower-occupation partners' occupational classes had a significant effect on their own social capital. In female-class-predominant families, it also had a significant effect on their partners' social capital. However, in male-class-predominant families, the effect was indirect. If the most-recent-job NS-SEC was applied, the effect became non-significant.

8.6 Summary

This chapter investigated the impact of women and the lower-occupation partners' occupations on their own and their partners' social capital. Through this investigation, it explores whether it is problematic to use only men's or the higher-occupation partners' occupations to estimate the social positions of individuals, and further questions the conventional and dominance approaches which use only men or the higher-occupation

partners' occupations to measure social classes.

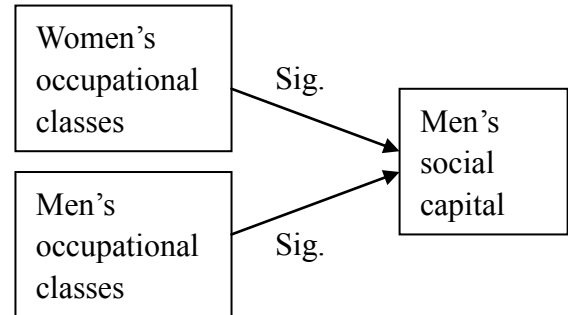
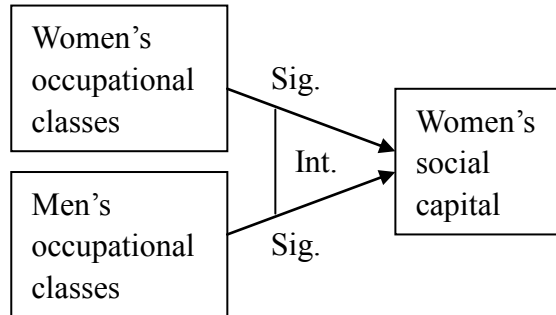
Multiple bar charts and MANOVA were used to examine the importance of women's occupations to their own and their partners' social capital in all families. Then the same types of analyses were done for three different types of families, male-class-predominant families, female-class-predominant families and class-homogenous families. The findings are summarised in Figure 8.3.

There are three hypotheses derived from the main research question of this chapter (see Section 8.2). The first hypothesis represents the conventional view. It expects that only the male partners' occupational classes had a significant impact on their own and their female partners' social capital. This chapter found that women's occupational classes also had a significant impact on their social capital, even in male-class-predominant families. Moreover, the impact of women's occupational classes on their male partners' social capital was either significant (e.g. in female-class-predominant families) or indirect (in male-class-predominant families). Consequently, women's occupations were important when predicting their own and their partners' social positions (except women in male-class-predominant families defined by the most-recent-job NS-SEC). Probably women's occupations should not be ignored when measuring their own and their male partners' social class.

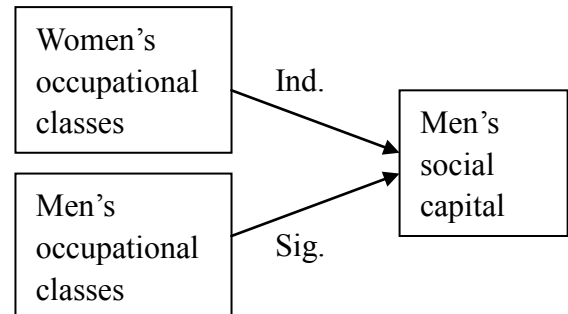
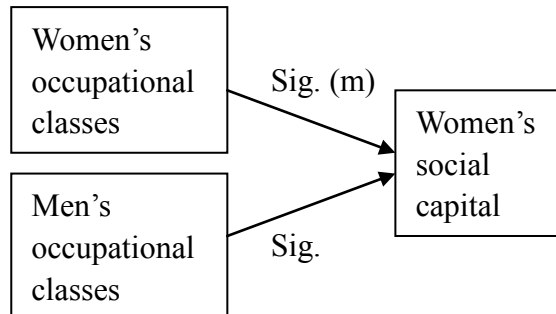
The second hypothesis represents the dominance approach. It expects that only the

Figure 8.3 A summary of Tables 8.1 and 8.2, the impact of women and the lower-occupation partners' occupational classes on their own and their partners' social capital

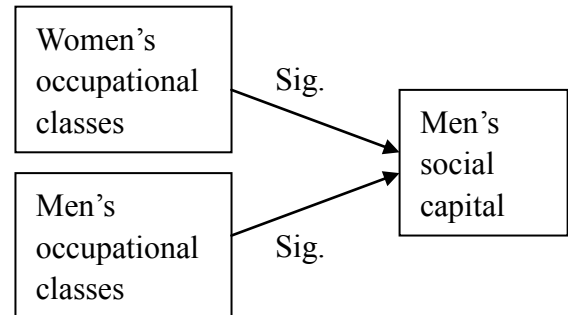
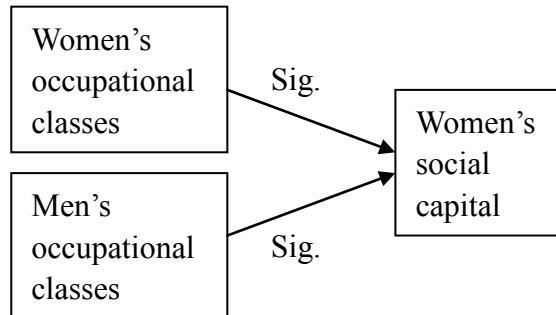
All Families



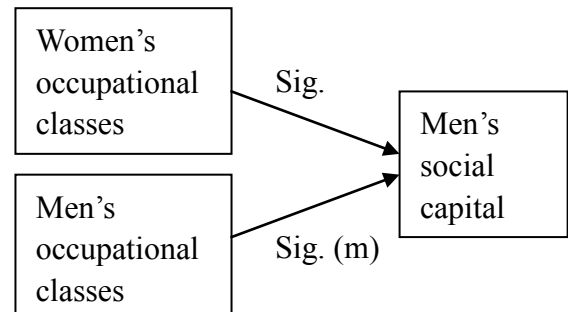
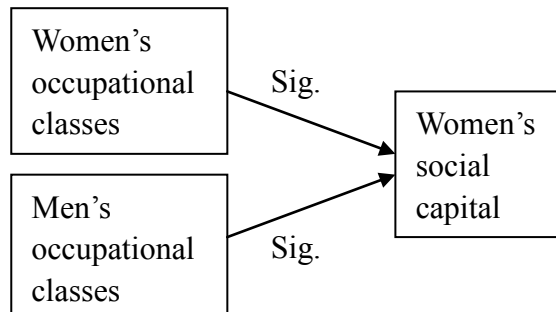
MCPFs



CHF



FCPFs



Note:

i Sig. denotes that the relationship between the explanatory variable and the outcome variables was significant.

- ii Sig. (m) means that the relationship between the explanatory variable and the outcome variables was significant at a marginal level ($p < 0.05$).
- iii Int. denotes that the impact of the two explanatory variables (left) on the outcome variables (right) was interdependent.
- iv Ind. denotes that the explanatory variable (left) influenced the outcome variables (right) indirectly through another explanatory variable.
- v The most-recent-job version is in Note [9].

Source: BHPS, 1991-2008

higher-class partners' occupational classes had a significant impact on their own and their partners' social capital. Research in this chapter revealed that the occupations of the higher-occupation partners indeed had a significant impact on their own and their partners' social capital. However, the lower-occupation partners' occupations also had a significant effect on their own social capital. They even had a significant (in male-class-predominant families) or indirect (in female-class-predominant families) impact on their partners' social capital. Therefore, the lower-occupation partners' occupations are also important, at least, to the measure of their own and their partners' social positions (except women in male-class-predominant families defined by the most-recent-job NS-SEC). They are especially important when the male partner was in the lower occupation compared with the female partner. This evidence suggests that the dominance approach may be problematic.

The third hypothesis represents the joint-classification approach. It expected that both the male and the female partners' occupational classes have a significant impact on their own and their partners' social capital. It is true in female-class-predominant families and class-homogenous families, but partially true in male-class-predominant families. In

male-class-predominant families, women's occupational classes had indirect influence on men's social capital. Although the influence was indirect, it is significant and should not be ignored. Only when the most-recent-job NS-SEC was used, the influence became non-significant. In brief, both men and women's occupations had a significant and independent impact on their own social capital. Except male-class-predominant families, both men and women's occupations also had significant and independent influences on their partners' social capital. Although this hypothesis is not fully supported by the findings in this chapter, it is the closest to the findings.

In short, findings in this chapter pointed out the potential problems of the conventional approach and the dominance approach. It seems that the joint-classification approach is relatively the best. The findings also show that, in most cases, the within-couple influences were two-way rather than one-way. When measuring the social positions of individuals, it would be better to consider both partners' occupations rather than only one of them. However, the results found in this chapter should be interpreted carefully, because it is not a direct validity test for the three approaches. The findings raise concerns about the conventional and dominance approaches. Further research is needed to seek the full answer. The next chapter will summarise the findings of the whole thesis and further explain the answers to the main research question of the whole thesis.

CHAPTER NINE

CONCLUSION

9.1 Introduction

In the last three chapters, I conducted analyses for three research questions. This chapter will review findings in previous chapters, and explain to what extent the three main research questions have been answered. The originality of this research will be pointed out. The limitations will be discussed and suggestions will be given for the future research.

9.2 Findings

This thesis examined the heterogeneity between the male and female partners in terms of social class and social capital, the social influence within couples, and the validity of joint classification approach in comparison with the conventional and dominance approaches. Besides that, it also established a conceptual and methodological framework for the measurement of cross-class families and social class. Various valuable findings were obtained.

9.2.1 Patterns of cross-class families

In the descriptive analyses for the distribution of different types of families in British society in 2008, results revealed that three in five married and cohabiting heterosexual couples were cross-class couples (61.5 per cent) defined by current job. If most recent job was used, almost four in five couples were class-heterogeneous (76.6 per cent). The size of cross-class families was larger than that in previous studies (Britten and Heath, 1983; Leiulfsrud and Woodward, 1988). It may be due to differences of class scheme and/or increasing number of cross-class families. Therefore, more attention is needed for these families.

Over half of the class-heterogeneous couples consisted of women in lower class and men in higher class (58.2 per cent for current job and 55.1 per cent for most recent job). It was interesting to find that a substantial amount of class-heterogeneous families consisted of couples of which the female partner was in a higher class position than the male partner (41.8 per cent for current job and 44.9 per cent for most recent job). Future research could focus on the comparison between the importance of women's occupational class in explaining the family class in female-class-predominant families, and the importance of men's occupational class in male-class-predominant families. It can also examine if these two types of families are equally important as the dominance approach did, or completely different as the conventional approach did.

9.2.2 Patterns of social capital

The pattern of social capital is illustrated in Chapter 5 (Table 5.3). Based on thirty indicators obtained from the BHPS, three social capital factors were generated. The maximum and minimum values of civic participation social capital are higher than friendship social capital, but the mean and median neighbourhood social capital are lower than friendship social capital. On average, men tended to have a higher level of median social capital than women.

9.2.3 Social capital heterogeneity in cross-class families

Chapter 6 examined the heterogeneity of couples in terms of social class and social capital, in order to see if all families are class homogenous. The preliminary analyses of the relationships between social capital and social class revealed that the three social capital factors were all positively and significantly associated with social class. Men were likely to have a higher level of social capital than women. After controlling for the gender effect, social capital and social class were still significantly and positively correlated. It suggests that the association between social capital and social class is quite robust.

The friendship social capital of 'cross-class' partners differed significantly. The differences in neighbourhood social capital were significant in class-opposing male-class-predominant families. The differences in civic participation social capital were significant in class-opposing families and class-mixed female-class-predominant families. This suggests

that cross-class couples may indeed have distinctive social positions, at least in class-opposing families. It is problematic to ignore the difference between partners whose occupations or employment status were different, as the conventional and dominance view theorists did.

In addition, social class reflected the inequality of formal social capital quite well, and the inequality of friendship social capital in male-class-predominant families. However, it was not very good at describing the inequality of neighbourhood social capital and friendship social capital in the female-class-predominant families. On average, men were more likely to have a higher level of informal social capital than their female partner. It suggests that it would be better to combine the occupation and social capital when measuring an individual's socio-economic position.

Further, male-class-predominant families had distinctive features compared with female-class-predominant families. For example, in male-class-predominant families, the direction of the informal social capital heterogeneity tended to be similar to the direction of the social class heterogeneity. Namely, the partner in the higher social class was likely to have a higher level of informal social capital than the other partner. However, in female-class-predominant families, the direction of the informal social capital heterogeneity tended to be opposite to the social class heterogeneity. For these reasons, male-class-predominant families should not be ignored in the study of cross-class families.

9.2.4 Social capital mutual influences in cross-class families

Chapter 7 examined whether partners in cross-class families influenced one another in terms of social capital. It found that in class-homogenous families and six types of cross-class families, partners, more or less, influenced each other significantly in terms of social capital. The higher the male partner's social capital was, the higher his female partner's social capital was, and *vice versa*. It is the case even in families where couples differed significantly in terms of both their occupational class and social capital.

It was also found that partners who influenced one another significantly and strongly in social capital did not necessarily have similar levels of social capital. Partners who influenced each other moderately in social capital did not necessarily have significantly different levels of social capital. Furthermore, as couples' class homogeneity increased, the strength of their social capital association increased (with an exception for the association of friendship social capital of class-mixed couples). In addition, when partners differed significantly in occupational and social capital levels, the associations of corresponding social capital between them were much weaker than those who were homogeneous in both occupational and social capital levels, but such correlations were mostly still present.

These findings suggest that the within-couple mutual influences should be distinguished from 'social capital homogamy'. Even if partners did influence one another significantly in terms of social capital, it does not mean that they have similar levels of social capital. For

example, in class-homogenous families and male-class-predominant class-opposing families, the partners' informal social capital levels were different significantly, but also *associated* significantly. Moreover, social capital mutual influences should not be used as the evidence of social capital homogamy or social class homogamy without further examination. The theorists of the conventional approach and the dominance approach often use 'sharing' as an evidence of social class homogamy. However, this thesis found that even if partners share some of their social contacts so that their social capital correlated significantly, their social capital could still be significantly different. In other words, sharing may mean association, correlation or mutual influences rather than similarity or equality.

9.2.5 The occupations of the female and lower-occupation partners matter

Chapter 8 investigated the impact of women and the lower-occupation partners' occupations on their own and their partners' social capital. It found that it is problematic to use only men or the higher-occupation partners' occupations to estimate the social positions of individuals, and further questions the conventional and dominance approaches which use only men or the higher-occupation partners' occupations to measure social classes.

The results showed that women's occupational classes had a significant impact on their social capital, even in male-class-predominant families. Moreover, the impact of women's occupational classes on their male partners' social capital was either significant (e.g. in

female-class-predominant families) or indirect (in male-class-predominant families). Consequently, women's occupations were important when predicting their own and their partners' social positions (except women in male-class-predominant families defined by the most-recent-job NS-SEC). Probably women's occupations should not be ignored when measuring their own and their male partners' social class.

In addition, it found that the occupations of the higher-occupation partners indeed had a significant impact on their own and their partners' social capital. However, the lower-occupation partners' occupations also had a significant effect on their own social capital. They even had a significant (in male-class-predominant families) or indirect (in female-class-predominant families) impact on their partners' social capital. Therefore, the lower-occupation partners' occupations are also important, at least, to the measure of their own and their partners' social positions (except women in male-class-predominant families defined by the most-recent-job NS-SEC). They are especially important when the male partner was in the lower occupation compared with the female partner. This evidence suggests that the dominance approach may be problematic.

It seems that the joint-classification approach is relatively the best compared to the conventional and dominance approaches. In female-class-predominant families and class-homogenous families, both the male and the female partners' occupational classes have a significant impact on their own and their partners' social capital. It is partially true in

male-class-predominant families. In male-class-predominant families, women's occupational classes had indirect influence on men's social capital. Although the influence was indirect, it is significant and should not be ignored. Only when the most-recent-job NS-SEC was used, the influence became non-significant. In brief, both men and women's occupations had a significant and independent impact on their own social capital. Except male-class-predominant families, both men and women's occupations also had significant and independent influences on their partners' social capital.

9.3 Original contributions

9.3.1 An up-to-date dataset

Most research on similar topics was conducted two to three decades ago (Britten and Heath, 1983; Heath and Britten, 1984; Erikson, 1984; Leiulfsrud and Woodward, 1987; Graetz, 1991) or not about British society (Wright, 1997). This research used up-to-date large scale official dataset, respondents in latest wave of the British Household Panel Survey (BHPS) in 2008. It captured more up-to-date picture of the British society.

Some may argue that this sample is too small to have sufficient number of cases for each type of cross-class families derived from eight-class NS-SEC. In hindsight larger sample would allow further analysis on characteristics of each type of families ($8*8=64$ types). It should be taken in to account by future research.

9.3.2 An up-to-date class scheme

The class scheme used to define cross-class families was also up-to-date. Various class schemes had been used in previous research, such as the Registrar General's social class (Britten and Heath, 1983; McRae, 1986) and Wright's class scheme (Wright, 1997; Graetz, 1991). These studies rarely shed light on the reason for choosing specific class scheme. It, to some extent, caused the mess of research on this topic. Variation of class scheme may result in substantial variations of distribution of family class composition. This research noticed this matter and chose the best available class scheme for contemporary Britain. An official class scheme, NS-SEC 2000, was used. It inherits the principles of Goldthorpe's class scheme, and is consistent to the Registrar General's social class and the socio-economic groups.

This class scheme was also adjusted for gender difference, which was a major problem of previous class schemes and attracted a lot of controversy on cross-gender class comparison. The solution used by NS-SEC 2000 defined one's class not only by the job title, but also by the form of payment, incremental pay, notice required, promotion opportunities, autonomy and organisation size. These indicators, to some extent, distinguished the gender inequality within same occupation, but the solution is not exclusive. It is necessary to explore the cross-gender differences and improve the accuracy of class scheme on this matter in future research.

Some may argue that women's careers were likely to discontinuously be affected by the marriage, the child birth or the child rearing (Payne and Abbott, 1990). And married women tend to work part-time, which was one of the reasons why the conventional male-head-of-household approach abandoned women's occupational class in family class analysis (Goldthorpe, 1983). To deal with the issue about how to define women's occupational class influenced by their discontinuous careers, this thesis coded occupational class based on both current job and most recent job. It was strictly defined by women's occupation because this thesis intended to examine the influence of women's occupational class on their own and their partner's social class as well as the family class, and then find out if women's occupations did not make any contributions at all. The current job class scheme allocate women who were outside the labour force in the bottom class (Class VIII) in order to distinguish them from those who had job at the time of the interview. The most recent job class scheme allocate women outside the labour force by their latest gainful job. The results based on current job version showed the effect of women's current occupation. The results based on most recent job version showed the effect of women's current occupation or latest occupation if they did not have job at the time of interview (more discussion about the reason for keeping both current job version and most recent job version could be found in Chapter 4).

For the issue about how to define occupational class of women in part-time job, the class scheme used in this thesis differentiate part-time jobs from full-times jobs in terms of several

indicators, which are formed of payment, incremental pay, notice required, promotion opportunities, autonomy and organisation size (See Chapter 3). If there were any substantial difference between the full-time and part-time jobs, the NS-SEC 2000 class scheme should have been captured it through the set of indicators.

9.3.3 Introducing concept of social capital into class analysis

Social capital was, for the first time, introduced into the examination of family class and individual's social class. An increasing number of studies on social capital over last few decades attracted much attention, while no one shed light on the similarity between social capital components and social class. This thesis showed how the social capital model could be constituted for the purpose of estimating an individual's position in the social structure, and how to use social capital to estimate family class and individual social class for the examinations of three class analysis approaches.

Some may question the logic of using social capital factors as indicators of individual's social class and family class. It is notable that the model of social capital used in this thesis was designed for this purpose. The social capital model estimates individual's social status through (1) the structural level of one's closest friends and acquaintances met in civic organisations, (2) the capacity of keeping or improving the social status via job related resources embedded in the social networks, and (3) the capacity to mobilise the resources in

the social networks. Moreover, parents' occupational class, also known as class origin, was incorporated in the measure of social capital. It was regarded as one of the social networks which contain resources for job seeking or promotion. Different from occupational class, the social capital model used here not only shows the social status one had, but also reflects the within-couple influence. Therefore, the social capital factors could be used as indicators of individual's social class and family class.

This is not to say that social capital should replace occupational class in estimating an individual's social class and family class. The social capital factors tend to estimate social class via indirect indicators, while occupational class has direct information about one's life chance through engagement in the labour market. It would be better to use both direct and indirect indicators for the measure of social class in future research.

9.3.4 Empirical evidence on the problems of the conventional and dominance approach

This thesis revealed the significant effect of own occupational class on the measure of social class in all families. In other words, to measure individual's social capital of married and cohabiting men and women, their own occupation should be taken into account. It confirms some critiques on male-head-of-household approach (Britten and Heath, 1983; Erikson, 1984). In addition, for the first time, it suggested that the female and lower-occupation

partners' occupational classes matter to the measure of their own social class no matter what gender the class-inferior partner was.

It also questioned a misleading and widely-used assumption that sharing was equivalent to similarity. This thesis found that couples sharing social resources could have different level of social capital. In addition, their social capital levels are significantly correlated.

Another fundamental assumption of the conventional and dominance approaches is questioned. This thesis found that there were substantial amount of families where the male and the female partners were different significantly in terms of both occupation and social capital. It is not consistent with the claim made by Goldthorpe that all families are class homogenous. The adherents of the conventional and dominance approaches failed to provide direct empirical evidence for this claim. However, this assumption is one of the foundations of the conventional and dominance approaches. It should be thoroughly examined before making the assumption, and should not be assumed as self-evident.

9.4 Limitations

Given the small sample size, it is difficult to carry out analyses to examine difference between specific types of cross-class families. Eight-category occupational class yields sixty-four types of families. Some family type contains less than ten families. In future

research, if sample size is large enough, it would be worth examining that if social capital discrepancy increase as occupational class discrepancy increase, and if two discrepancies were in the same direction (i.e. the higher occupational class partner tend to have higher level of social capital than the partner in lower occupational class).

Due to the limit of space, this thesis did not discuss how to apply the joint classification approach in class analysis. The technical difficult of incorporating both partners' social classes in the measure of family class had been pointed out in previous research (Erikson, 1984; Graetz, 1991). It would be inevitable to use multivariate analysis if family class would be used as outcome variable. One solution is to refine the class scheme and also include partner's class as an indicator.

Moreover, the class scheme used in this thesis could be further refined in two aspects. One is to compare current job to most recent job to find out which one is the more accurate measure of individual social class. In other words, to adjust the classifications for the people who were not in labour force at the time of the interview but had a job before. ONS recommended several rules for coding these people. People left labour force less than six-month, one-year, two-year, and ten-year could be coded by their most recent job. People who left work longer than the suggested period should be coded in Class VIII along with those who never had any gainful job. The problem is which time period should be adopted. BHPS does not have information on the length of leaving the labour force. Therefore, it was not examined in this

thesis. If relevant information is available in the future, the class scheme should be refined.

In addition, the weakness in the measure of social capital is that some indicators are indirect measures due to lack of information in the BHPS. For example, the structural level of the neighbours was not available. This thesis estimated it through respondents' description about the crimes and other problems in the neighbourhood. The more problems reported, the lower structural level the neighbours might be. It was also difficult to distinguish friends from neighbours. Therefore the level of help received from the neighbours could merely be estimated from indicators about friends help.

The same problem was found when measuring organisation structural level. No information was available. The solution was, first, summarising the occupational class of people in the dataset who were in the same organisation, then using the proportion of people in each occupational class as weights. Multiplying it by the coding of occupational class, a score was calculated for each organisation as the structural level. The premise of this calculation is that if most of the people in the organisation were in a low class position, the probability of contacting low class members in the organisation is higher than high class members. It estimates the potential resources one could get via the participating in the organisations.

Although the measures of social capital indicators were not as good as expected, key elements were included (see social capital models and factor loading in Chapter 5). The

indicators of individual's social capital were the best available measures derived from the BHPS.

9.5 Future research

This research established a foundation of examining cross-class families. It demonstrated the importance of a clear theoretical and methodological framework of this analysis, and tried to examine three fundamental critiques made by the conventional and dominance approaches. Future research could examine cross-class families using longitudinal data, because family class composition changes over time. Cross-class families may not always be cross-class. It would be interesting to distinguish cross-class families at different life stages and compare the patterns and individual characteristics to explore what causes class heterogamy.

9.6 Conclusion

This chapter summarised findings of the whole thesis, mainly those in Chapters 6 to 8 on three research questions. The originalities of the thesis were highlighted. I admitted that there are some limitations which require further research. Some topics which this thesis did not have space to discuss were listed for future researchers. It is worthwhile to explore the multidimensional measurement of the social class. For example, two partners' occupations and social capital levels could be included. It may be more complicated than the single dimensional measure. However, the multidimensional measurement is more consistent to the

real life situation because the factors which affect an individual and a family's social class may be more than one. Before that, it is vital to further discuss the theoretical and methodological framework of cross-class families. Without a solid ground, the further development on cross-class families will still be complicated and difficult to apply.

Notes

Chapter Four Conceptualising and Measuring Cross-class Families

[1]

Figure n.4.1 The full-version of the NS-SEC

L1 Employers in Large Organisations	L10 Lower Supervisory Occupations
L2 Higher Managerial Occupations	L11 Lower Technical Occupations
L3 Higher Professional Occupations	L11.1 Lower technical craft occupations
L3.1 'Traditional' employees	L11.2 Lower technical process operative occupations
L3.2 'New' employees	L12 Semi-routine Occupations
L3.3 'Traditional' self-employed	L12.1 Semi-routine sales occupations
L3.4 'New' self-employed	L12.2 Semi-routine service occupations
L4 Lower Professional and Higher Technical Occupations	L12.3 Semi-routine technical occupations
L4.1 'Traditional' employees	L12.4 Semi-routine operative occupations
L4.2 'New' employees	L12.5 Semi-routine agricultural occupations
L4.3 'Traditional' self-employed	L12.6 Semi-routine clerical occupations
L4.4 'New' self-employed	L12.7 Semi-routine childcare occupations
L5 Lower Managerial Occupations	L13 Routine Occupations
L6 Higher Supervisory Occupations	L13.1 Routine sales and service occupations
L7 Intermediate Occupations	L13.2 Routine production occupations
L7.1 Intermediate clerical and administrative occupations	L13.3 Routine technical occupations
L7.2 Intermediate service occupations	L13.4 Routine operative occupations
L7.3 Intermediate technical and auxiliary occupations	L13.5 Routine agricultural occupations
L7.4 Intermediate engineering occupations	L14 Never Worked and Long-term Unemployed
L8 Employers in Small Organisations	L14.2 Long-term unemployed
L8.1 Employers in small organisations in industry, commerce, services, etc.	L15 Full-time Students
L8.2 Employers in small organisations in agriculture	L16 Occupations not stated or inadequately described
L9 Own-account Workers	L17 Not classifiable for other reasons
L9.1 Own-account workers (non-professional)	
L9.2 Own-account workers in agriculture	

Source: ONS, 2005b, p.23, Figure 2.

[2]

Figure n.4.2 The analytic class variables of the NS-SEC

Operational categories		Analytic variables		
		Eight (Nine) classes		Five classes
L1 Employers in large organisations	1.1 Large employers and higher managerial occupations	1 Managerial and professional occupations	1 Managerial and professional occupations	1 Managerial and professional occupations
L2 Higher managerial occupations				
L3 Higher professional occupations	1.2 Higher professional occupations			
L4 Lower professional and higher technical occupations	2 Lower managerial and professional occupations			
L5 Lower managerial occupations				
L6 Higher supervisory occupations				
L7 Intermediate occupations	3 Intermediate occupations	2 Intermediate occupations	2 Intermediate occupations	
L8 Employers in small organisations	4 Small employers and own-account workers	3 Small employers and own-account workers		
L9 Own-account workers				
L10 Lower supervisory occupations	5 Lower supervisory and technical occupations	4 Lower supervisory and technical occupations	3 Routine and manual occupations	
L11 Lower technical occupations				
L12 Semi-routine occupations	6 Semi-routine occupations	5 Semi-routine and routine occupations		
L13 Routine occupations	7 Routine occupations			
L14 Never worked and long-term unemployed	8 Never worked and long-term unemployed	Never worked and long-term unemployed	Never worked and long-term unemployed	

Source: ONS, 2005b, p.38, Figure 4.

[3]

Table n.4.1 The distribution of the social classes of individuals using the most-recent-job NS-SEC, 2008, column percentages

	8-class version	3-class version
I HMAP	7.7	
II LMAP	18.2	25.9
III INT	10.4	
IV SEOA	6.6	17.0
V LST	5.9	
VI SROU	13.8	
VII ROU	9.6	
VIII NW	2.9	32.2
Missing ⁱ		24.9
Total %		100.0
Weighted N		15527.4

Note:

i Missing cases are those gave inappropriate answers or those who did not give answer.

Source: BHPS, 2008

[4]

Table n.4.2 The distribution of two genders in the social class using the most-recent-job NS-SEC, 2008, row percentages

		Men	Women
I HMAP	All	69.1	30.9
	Married & cohabiting ⁱ	71.6	28.4
II LMAP	All	42.8	57.2
	Married & cohabiting	44.6	55.4
III INT	All	26.7	73.3
	Married & cohabiting	24.6	75.4
IV SEOA	All	67.0	33.0
	Married & cohabiting	67.7	32.3
V LST	All	74.0	26.0
	Married & cohabiting	74.3	25.7
VI SROU	All	34.3	65.7
	Married & cohabiting	31.0	69.0
VII ROU	All	54.5	45.5
	Married & cohabiting	56.2	43.8
VIII NW	All	53.4	46.6
	Married & cohabiting	9.5	90.5
Total %	All	48.2	51.8
	Married & cohabiting	49.0	51.0
Weighted N	All	5463.6	5879.9
	Married & cohabiting	3555.4	3697.6

Note:

i It only contains adults in heterosexual relationships.

Source: BHPS, 2008

[5]

Table n.4.3 The class distribution by sex using the most-recent-job NS-SEC, 2008, column percentages

	All		Married and cohabiting	
	Men	Women	Men	Women
I HMAP	14.4	6.0	17.6	6.7
II LMAP	21.3	26.5	24.2	28.8
III INT	7.7	19.5	7.0	20.7
IV SEOA	12.1	5.5	14.3	6.5
V LST	12.1	4.0	12.6	4.2
VI SROU	13.2	23.5	9.9	21.1
VII ROU	14.7	11.4	14.3	10.7
VIII CNLF	4.4	3.6	0.1	1.3
Weighted N	5463.6	5879.9	3555.4	3697.6

Source: BHPS, 2008

[6]

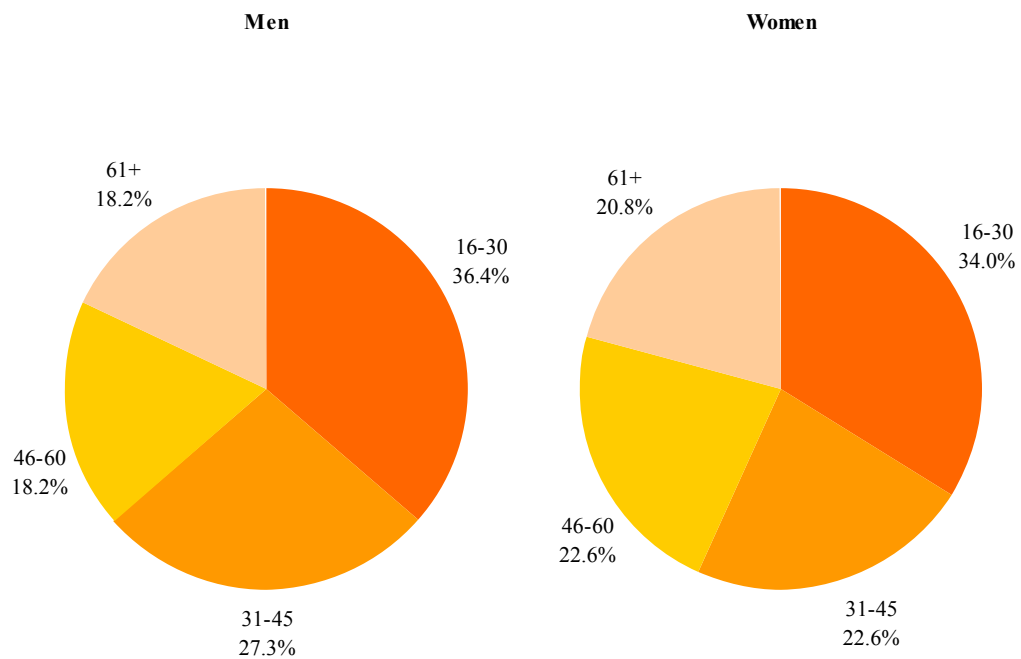
Table n.4.4 The mean age of men and women in eight social classes using the most-recent-job NS-SEC, 2008

	All		Married and cohabiting	
	Men	Women	Men	Women
I HMAP	43.9	41.4	46.0	43.2
II LMAP	43.1	41.9	45.1	45.2
III INT	40.0	41.8	44.9	46.6
IV SEOA	46.8	48.0	47.9	51.3
V LST	40.9	44.2	44.8	49.1
VI SROU	37.5	40.4	46.5	48.4
VII ROU	42.8	42.3	48.7	49.5
VIII CNLF	19.0	28.5	45.4	49.9
Weighted N	5463.6	5879.9	3403.3	3506.1

Source: BHPS, 2008

[7]

Figure n.4.3 The pie chart of the age distribution of married and cohabiting men and women in Class VIII defined by the most-recent-job NS-SEC, 2008



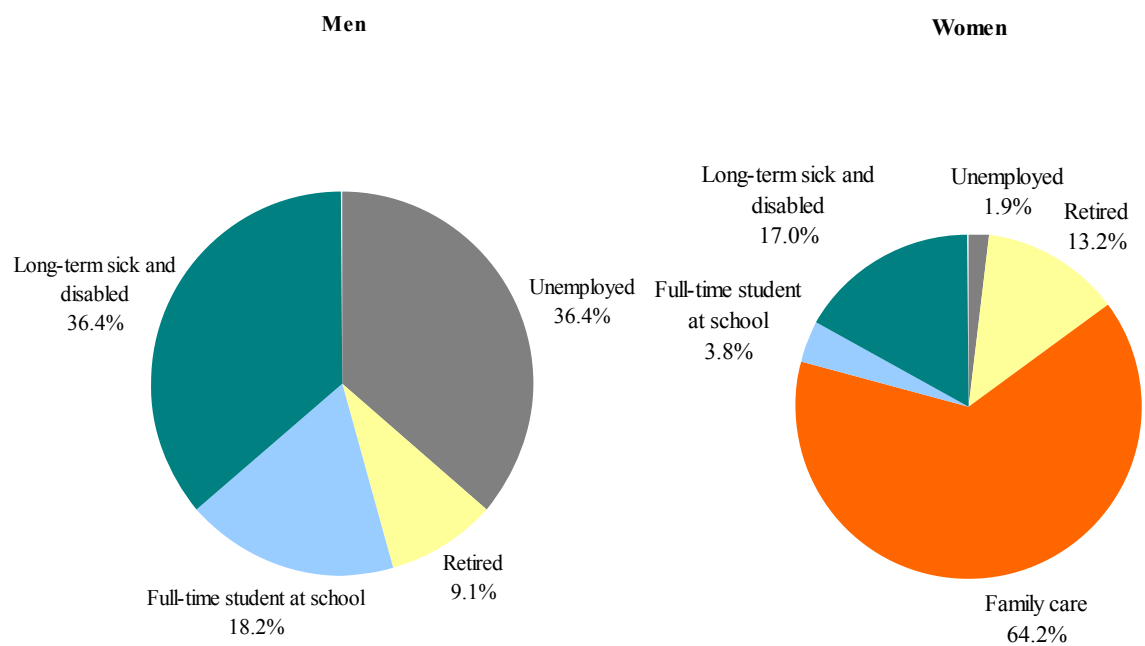
Note:

i The unweighted total number of married and cohabiting men in Class VIII is 11; The unweighted total number of married and cohabiting women in Class VIII is 53.

Source: BHPS, 2008

[8]

Figure n.4.4 The pie chart of the employment status of married and cohabiting men and women in Class VIII defined by the most-recent-job NS-SEC, 2008



Note:

i The unweighted total number of married and cohabiting men in Class VIII is 11; The unweighted total number of married and cohabiting women in Class VIII is 53.

Source: BHPS, 2008

[9]

Table n.4.5 The family class matrix of married and cohabiting couples using the most-recent-job NS-SEC, 2008, cell percentages (Weighted N=3187.9)

		Women's class							
Men's class	%	I HMAP	II LMAP	III INT	IV SEOA	V LST	VI SROU	VII ROU	VIII NW
	I HMAP	2.8	7.2	3.8	1.0	0.4	2.0	0.5	0.1
	II LMAP	2.3	10.0	5.3	1.2	0.6	3.6	1.6	0.0
	III INT	0.2	2.3	1.8	0.4	0.2	1.2	0.6	0.0
	IV SEOA	0.9	3.5	2.5	2.0	0.6	2.9	1.4	0.3
	V LST	0.5	2.7	3.0	0.6	1.0	3.7	1.6	0.1
	VI SROU	0.2	2.0	1.8	0.3	0.7	2.9	1.4	0.2
	VII ROU	0.3	2.3	2.8	0.5	0.9	4.0	2.9	0.3
	VIII NW	-	0.0	0.0	0.1	-	0.0	0.0	-

Note:

i The most-recent-job version is in Note [6].

Source: BHPS, 2008

[10]

Table n.4.6 The distribution of different types of family class composition using the most-recent-job NS-SEC, 2008, cell percentages

CHF _s	23.4	I+II	12.8		
		III+IV	3.8		
		V-VIII	6.8		
CCF _s	76.6	MCPF _s	42.2	A ⁱ	14.9
				M	18.5
				O	8.8
		FCPF _s	34.4	A	10.4
				M	16.0
				O	8.0
Total %	100.0	100.0			
Weighted N	3187.9	3187.9			

Note:

i Degree of heterogeneity:

A = Class-adjacent Families;

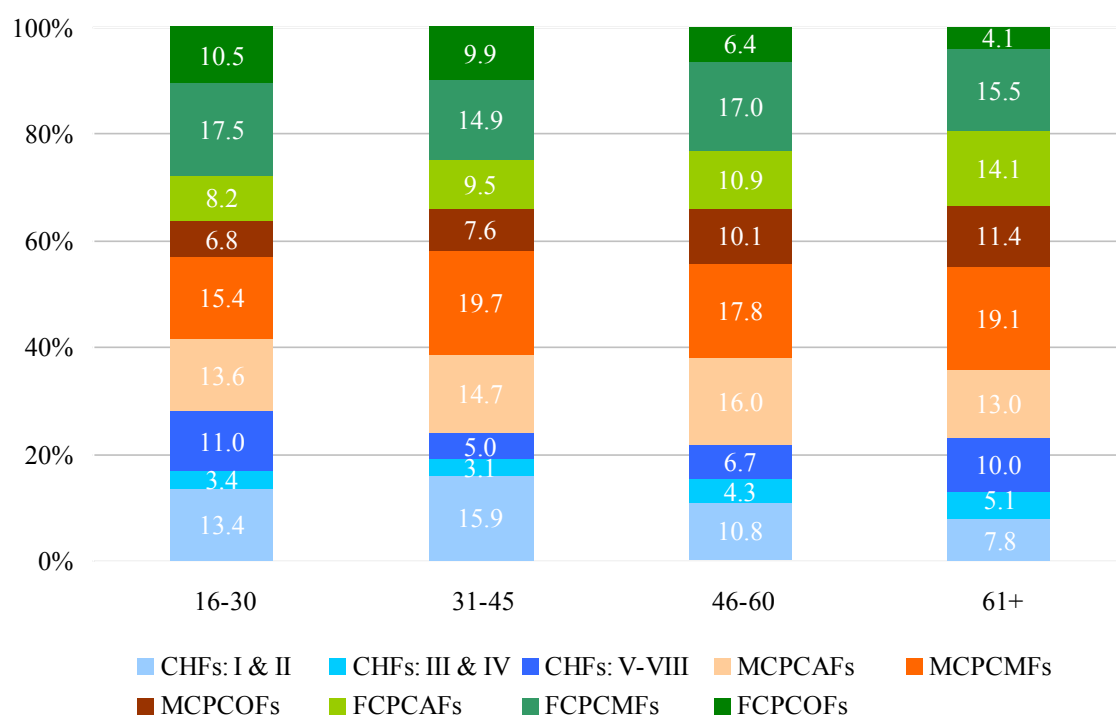
M = Class-mixed Families;

O = Class-opposing Families.

Source: BHPS, 2008

[11]

Figure n.4.5 Family class composition distributions measured through the most-recent-job NS-SEC in four age groups of the male partner, 2008, row percentages



Note:

i Family class compositions:

CHF: I & II: Class-homogenous families formed of partners both in service class;

CHF: III & IV: Class-homogenous families formed of partners both in intermediate class;

CHF: V-VIII: Class-homogenous families formed of partners both in working class;

MCPCAFs: Male-class-predominant class-adjacent families;

MCPCMFs: Male-class-predominant class-mixed families;

MCPCOFs: Male-class-predominant class-opposing families;

FCPCAFs: Female-class-predominant class-adjacent families;

FCPCMFs: Female-class-predominant class-mixed families;

FCPCOFs: Female-class-predominant class-opposing families.

Source: BHPS, 2008

Chapter Five Conceptualising and Measuring the Social Capital

[1]

Table n.5.1 Normality tests for distributions of social capital, 2008

	Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistic	df	Statistic	df
<i>All</i>				
Friendship social capital	0.228***	6,771	-	-
Neighbourhood social capital	0.072***	6,771	-	-
Civic participation social capital	0.113***	6,771	-	-
<i>Men</i>				
Friendship social capital	0.233***	3,362	0.679***	3,362
Neighbourhood social capital	0.074***	3,362	0.947***	3,362
Civic participation social capital	0.111***	3,362	0.938***	3,362
<i>Women</i>				
Friendship social capital	0.229***	3,409	0.669***	3,409
Neighbourhood social capital	0.071***	3,409	0.951***	3,409
Civic participation social capital	0.122***	3,409	0.924***	3,409

Note:

i 'df' denotes the degree of freedom. 'Sig.' denotes the significance level.

ii ***: p<0.001

Source: BHPS, 1991-2008

Chapter Six Social Capital Heterogeneity in Cross-class Families

[1]

Table n.6.1 Normality tests for distributions of social capital in eight social class using current-job NS-SEC, 2008

	Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistic	df	Statistic	df
<i>Friendship social capital</i>				
I	0.219***	576	0.665***	576
II	0.225***	1303	0.635***	1303
III	0.240***	638	0.618***	638
IV	0.252***	485	0.656***	485
V	0.216***	368	0.690***	368
VI	0.242***	648	0.664***	648
VII	0.241***	457	0.691***	457
VIII	0.221***	971	0.734***	971
<i>Neighbourhood social capital</i>				
I	0.069***	576	0.954***	576
II	0.064***	1303	0.958***	1303
III	0.060***	638	0.967***	638
IV	0.072***	485	0.954***	485
V	0.052*	368	0.967***	368
VI	0.058***	648	0.970***	648
VII	0.060***	457	0.968***	457
VIII	0.092***	971	0.932***	971
<i>Civic participation social capital</i>				
I	0.074***	576	0.964***	576
II	0.078***	1303	0.962***	1303
III	0.109***	638	0.936***	638
IV	0.148***	485	0.899***	485
V	0.123***	368	0.926***	368
VI	0.129***	648	0.915***	648
VII	0.176***	457	0.882***	457
VIII	0.162***	971	0.885***	971

Note:

i 'df' denotes the degree of freedom. 'Sig.' denotes the significance level.

ii *: p<0.05, ***: p<0.001

Source: BHPS, 1991-2008

[2]

Table n.6.2 Normality tests for distributions of social capital in eight social class using most-recent-job NS-SEC, 2008

	Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistic	df	Statistic	df
<i>Friendship social capital</i>				
I	0.214***	615	0.668***	615
II	0.227***	1439	0.639***	1439
III	0.231***	764	0.633***	764
IV	0.239***	568	0.681***	568
V	0.215***	443	0.701***	443
VI	0.236***	898	0.693***	898
VII	0.222***	677	0.731***	677
VIII	0.237***	42	0.792***	42
<i>Neighbourhood social capital</i>				
I	0.070***	615	0.957***	615
II	0.070***	1439	0.949***	1439
III	0.064***	764	0.961***	764
IV	0.075***	568	0.950***	568
V	0.055**	443	0.966***	443
VI	0.063***	898	0.961***	898
VII	0.072***	677	0.952***	677
VIII	0.118	42	0.928*	42
<i>Civic participation social capital</i>				
I	0.071***	615	0.965***	615
II	0.078***	1439	0.962***	1439
III	0.114***	764	0.933***	764
IV	0.138***	568	0.901***	568
V	0.133***	443	0.921***	443
VI	0.147***	898	0.895***	898
VII	0.185***	677	0.869***	677
VIII	0.220***	42	0.827***	42

Note:

i 'df' denotes the degree of freedom. 'Sig.' denotes the significance level.

ii *: p<0.05, **: p<0.01, ***: p<0.001

Source: BHPS, 1991-2008

[3]

Table n.6.3 Normality tests for distributions of social capital in eight social class using current-job NS-SEC by sex, 2008

	Men				Women			
	Kolmogorov-Smirnov test		Shapiro-Wilk test		Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistic	df	Statistic	df	Statistic	df	Statistic	df
<i>Friendship social capital</i>								
I	0.244***	405	0.641***	405	0.164***	171	0.800***	171
II	0.220***	616	0.640***	616	0.240***	687	0.610***	687
III	0.227***	185	0.631***	185	0.249***	453	0.603***	453
IV	0.260***	359	0.653***	359	0.238***	126	0.676***	126
V	0.220***	289	0.696***	289	0.246***	79	0.649***	79
VI	0.237***	233	0.679***	233	0.253***	415	0.646***	415
VII	0.257***	317	0.692***	317	0.236***	140	0.667***	140
VIII	0.234***	276	0.753***	276	0.215***	695	0.728***	695
<i>Neighbourhood social capital</i>								
I	0.074***	405	0.948***	405	0.058	171	0.960***	171
II	0.068***	616	0.952***	616	0.062***	687	0.962***	687
III	0.064	185	0.969***	185	0.059**	453	0.965***	453
IV	0.073***	359	0.958***	359	0.096**	126	0.936***	126
V	0.059*	289	0.967***	289	0.090	79	0.954**	79
VI	0.080**	233	0.967***	233	0.052**	415	0.970***	415
VII	0.057*	317	0.967***	317	0.089**	140	0.963**	140
VIII	0.099***	276	0.920***	276	0.090***	695	0.937***	695
<i>Civic participation social capital</i>								
I	0.090***	405	0.964***	405	0.120***	171	0.948***	171
II	0.099***	616	0.956***	616	0.061***	687	0.965***	687
III	0.088**	185	0.955***	185	0.121***	453	0.923***	453
IV	0.148***	359	0.901***	359	0.159***	126	0.903***	126
V	0.118***	289	0.933***	289	0.161***	79	0.894***	79
VI	0.135***	233	0.939***	233	0.133***	415	0.897***	415
VII	0.159***	317	0.907***	317	0.221***	140	0.795***	140
VIII	0.175***	276	0.882***	276	0.163***	695	0.886***	695

Source: BHPS, 1991-2008

[4]

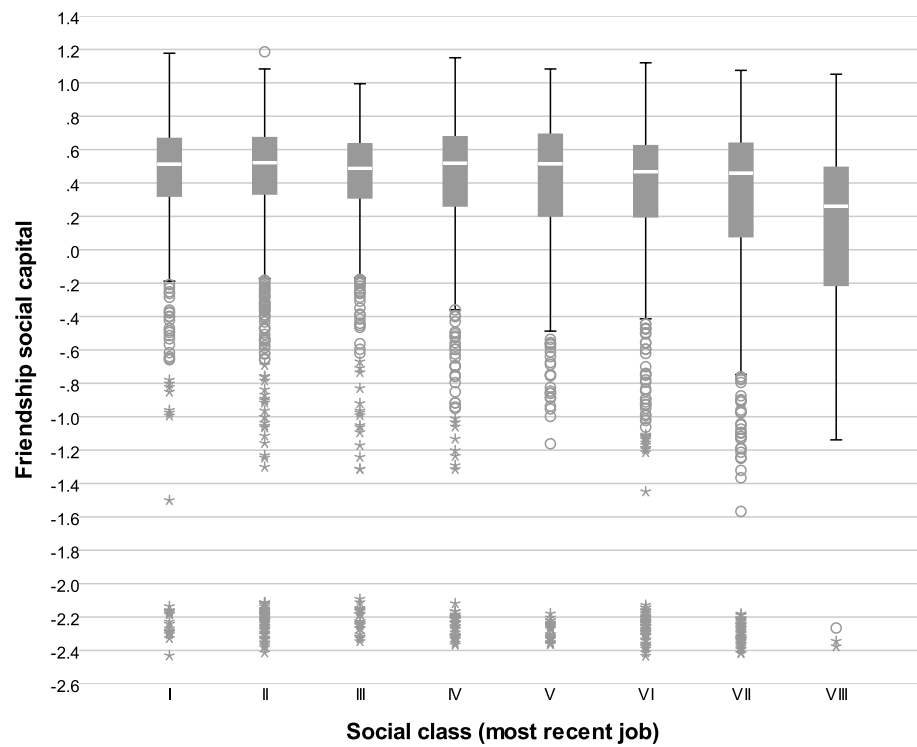
Table n.6.4 Normality tests for distributions of social capital in eight social class using most-recent-job NS-SEC by sex, 2008

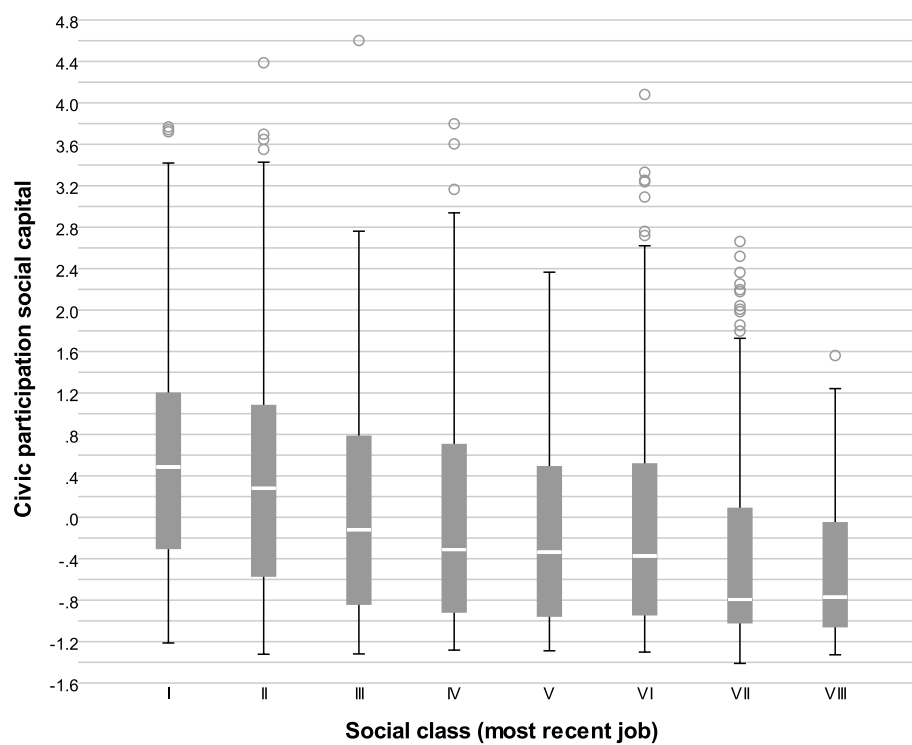
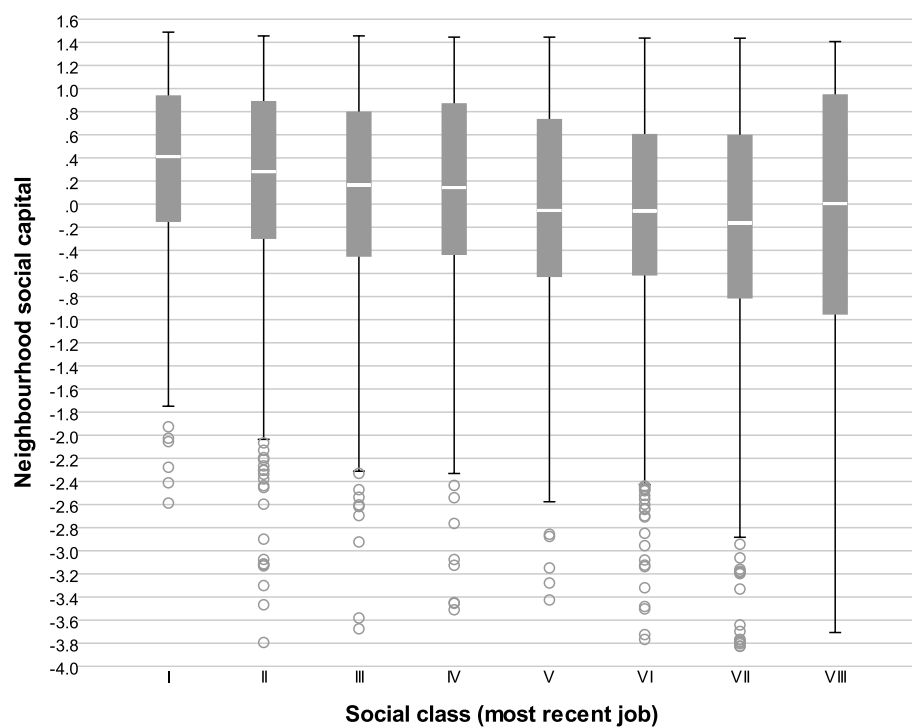
	Men				Women			
	Kolmogorov-Smirnov test		Shapiro-Wilk test		Kolmogorov-Smirnov test		Shapiro-Wilk test	
	Statistic	df	Statistic	df	Statistic	df	Statistic	df
<i>Friendship social capital</i>								
I	0.233***	423	0.649***	423	0.161***	192	0.798***	192
II	0.222***	648	0.646***	648	0.237***	791	0.610***	791
III	0.220***	206	0.647***	206	0.237***	558	0.618***	558
IV	0.257***	393	0.662***	393	0.223***	175	0.724***	175
V	0.221***	323	0.700***	323	0.232***	120	0.685***	120
VI	0.236***	284	0.693***	284	0.237***	614	0.685***	614
VII	0.249***	395	0.713***	395	0.228***	282	0.737***	282
VIII	0.349**	8	0.738*	8	0.211***	34	0.831***	34
<i>Neighbourhood social capital</i>								
I	0.075***	423	0.951***	423	0.061	192	0.967***	192
II	0.071***	648	0.950***	648	0.069***	791	0.948***	791
III	0.070**	206	0.957***	206	0.063***	558	0.962***	558
IV	0.075***	393	0.953***	393	0.075*	175	0.942***	175
V	0.066**	323	0.967***	323	0.083*	120	0.958**	120
VI	0.081***	284	0.960***	284	0.064***	614	0.959***	614
VII	0.080***	395	0.951***	395	0.078***	282	0.951***	282
VIII	0.199	8	0.911	8	0.129	34	0.925*	34
<i>Civic participation social capital</i>								
I	0.086***	423	0.965***	423	0.113***	192	0.951***	192
II	0.105***	648	0.954***	648	0.059***	791	0.967***	791
III	0.092***	206	0.956***	206	0.131***	558	0.920***	558
IV	0.144***	393	0.903***	393	0.135***	175	0.907***	175
V	0.120***	323	0.930***	323	0.177***	120	0.893***	120
VI	0.150***	284	0.927***	284	0.154***	614	0.876***	614
VII	0.163***	395	0.894***	395	0.225***	282	0.823***	282
VIII	0.266	8	0.786**	8	0.207**	34	0.837***	34

Source: BHPS, 1991-2008

[5]

Figure n.6.1 Boxplots for distributions of social capital in eight social classes using the most-recent-job NS-SEC, 2008





Source: BHPS, 1991-2008

[6]

Table n.6.5 Spearman's correlation coefficients of the associations between social capital and the social class (using the current-job NS-SEC), 2008

	Friendship social capital	Neighbourhood social capital	Civic participation social capital
Social class	0.093***	0.174***	0.305***

Note:

i The coding of two social class variables: the higher class the respondent was in, the higher value was assigned to these variables.

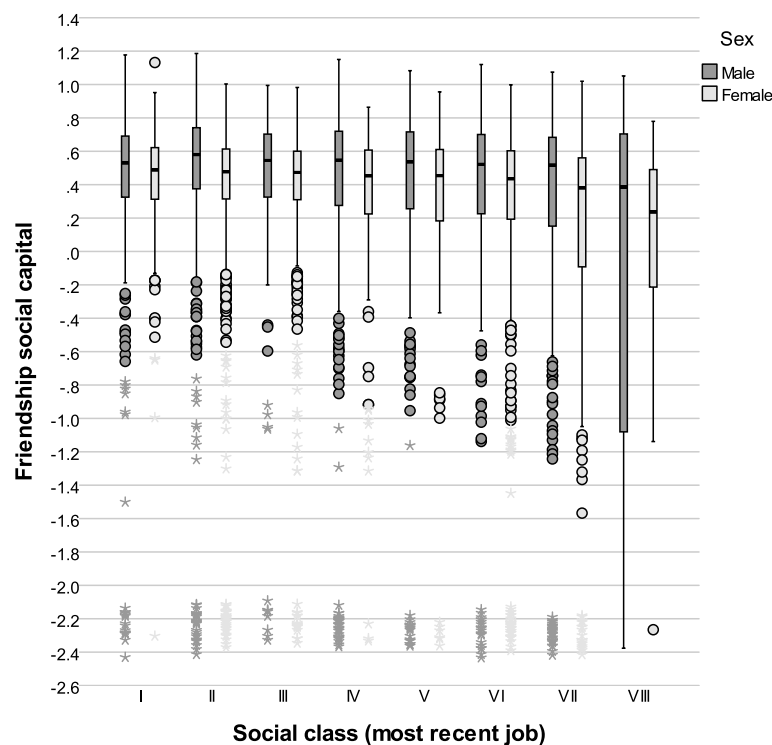
ii All tests are two-tailed.

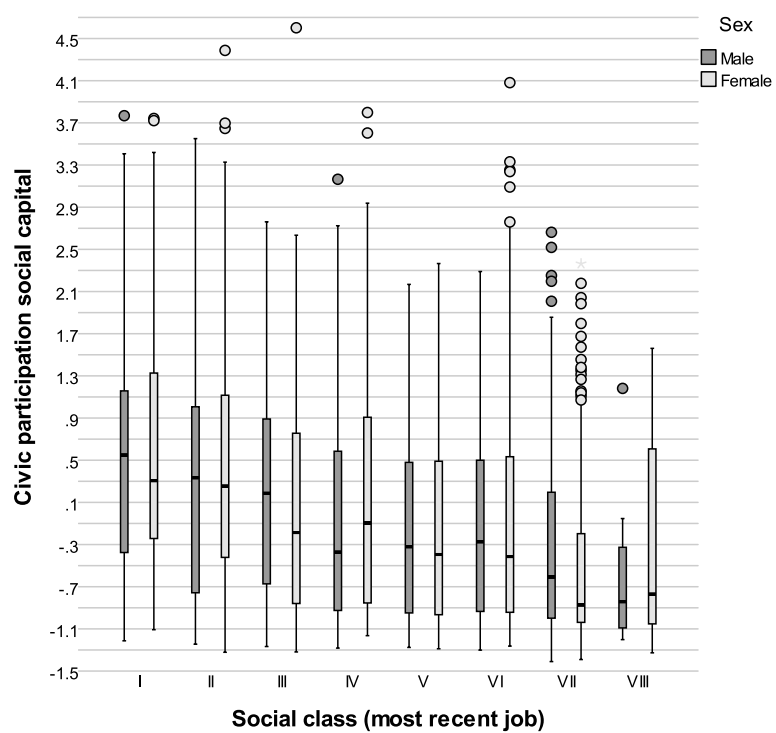
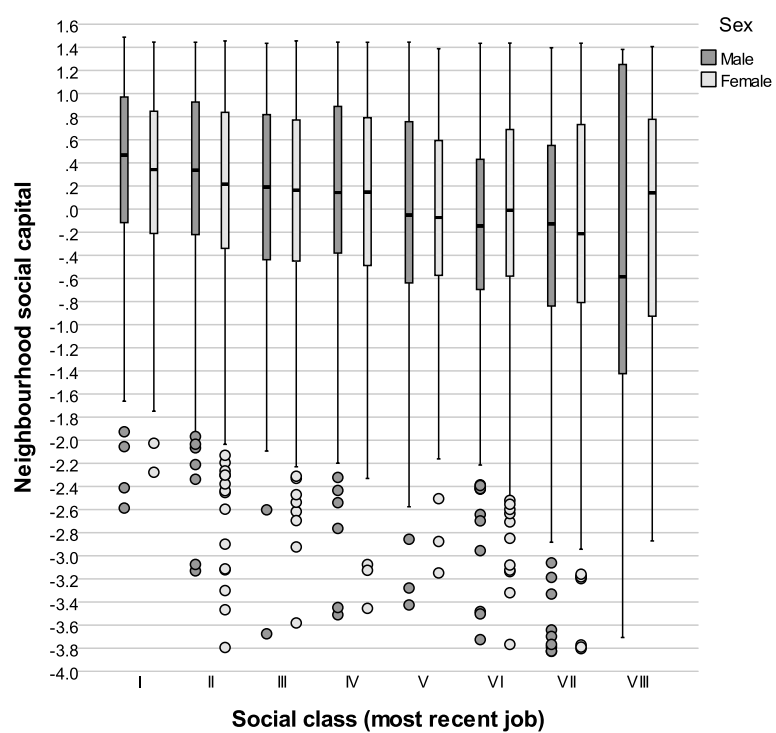
iii ***: $p < 0.001$.

Source: BHPS, 1991-2008

[7]

Figure n.6.2 Boxplots for distributions of social capital in eight social classes (using the most-recent-job NS-SEC) by sex, 2008





Source: BHPS, 1991-2008

[8]

Table n.6.6 Spearman's correlation for the association between social capital and the social class (using the most-recent-job NS-SEC), 2008

	Friendship social capital	Neighbourhood social capital	Civic participation social capital
<i>Social class</i>			
Men	0.062**	0.224***	0.300***
Women	0.117***	0.123***	0.315***

Note:

i The coding of two social class variables: the higher class the respondent was in, the higher value was assigned to these variables.

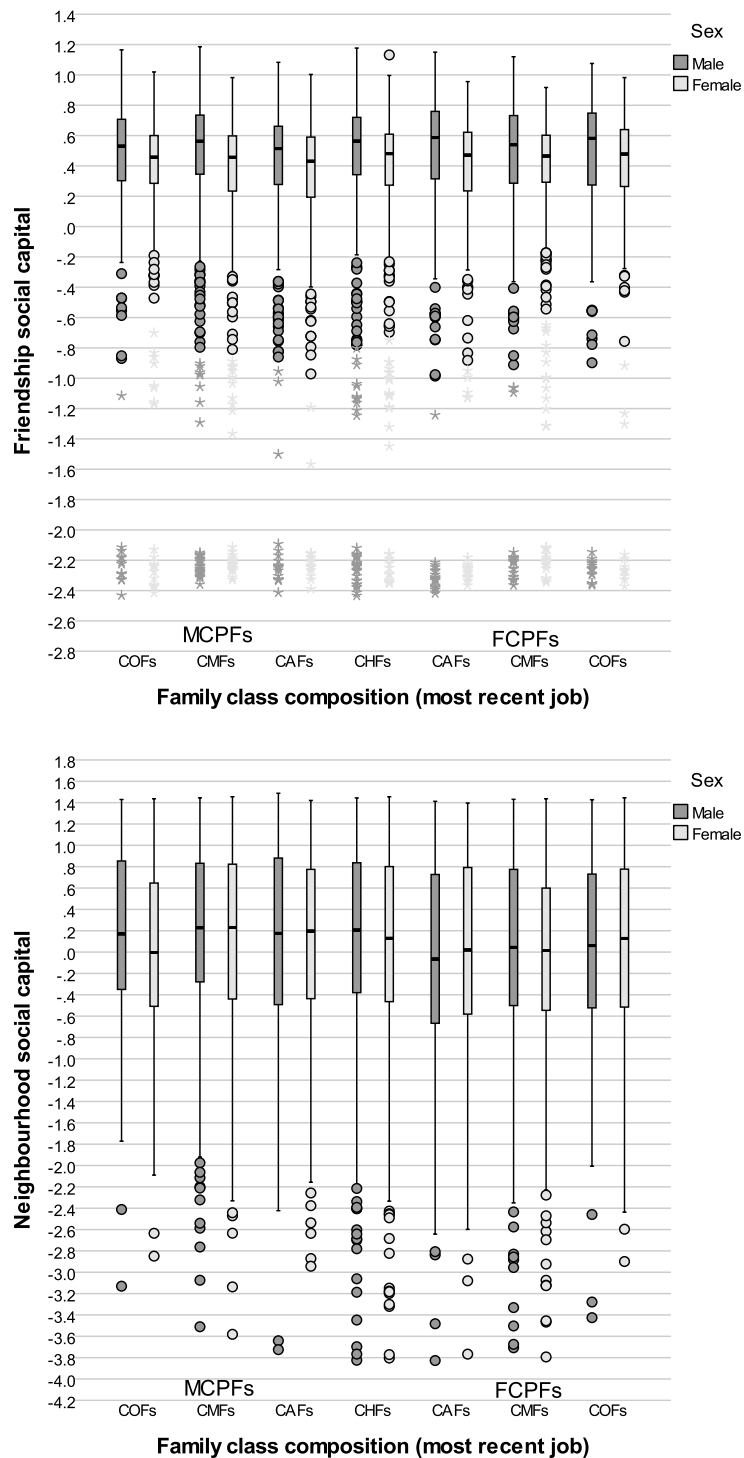
ii All tests are two-tailed.

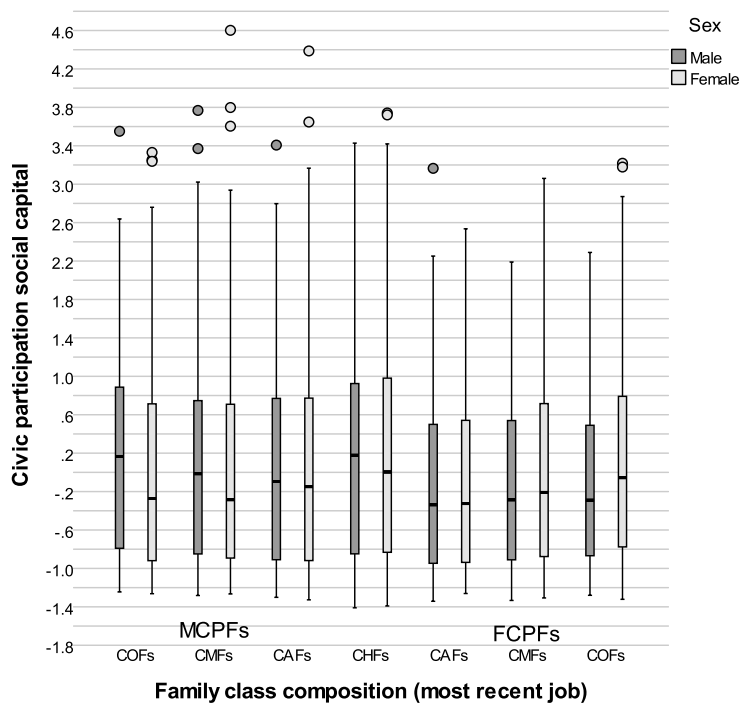
iii **: $p < 0.1$; ***: $p < 0.001$.

Source: BHPS, 1991-2008

[9]

Figure n.6.3 Boxplots for distributions of social capital by sex in seven types of families (measured through the most recent job), 2008

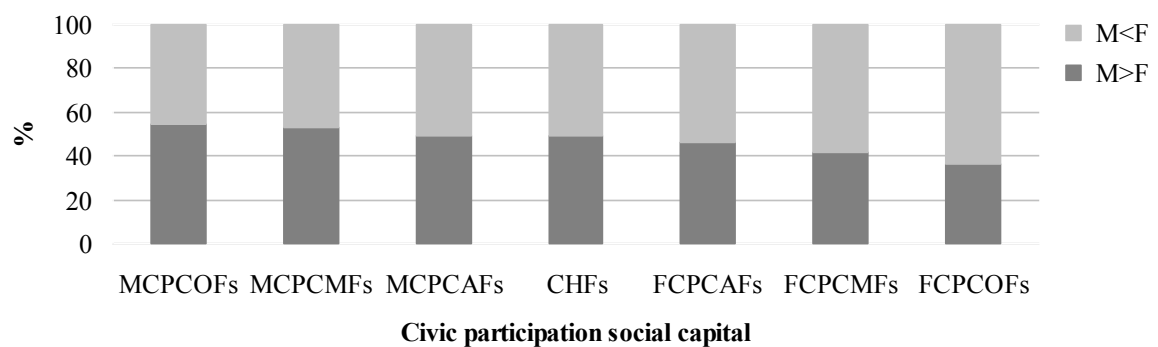
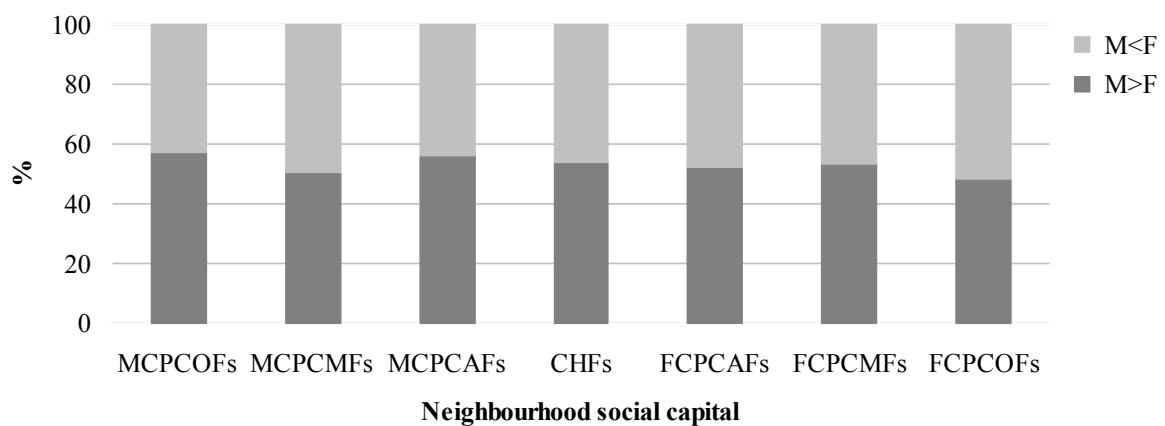
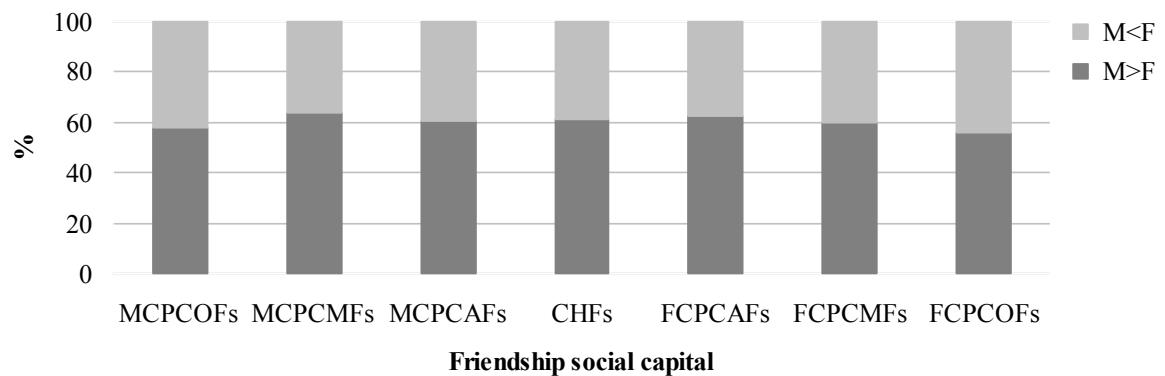




Source: BHPS, 1991-2008

[10]

Figure n.6.4 Bar chart of the proportions of male-social-capital-predominant families and female-social-capital-predominant families in seven types of families (measured through the most recent job), 2008



Note:

i 'M>F' denotes families in which the male partner had a higher level of social capital than

the female partner. 'M<F' denotes families in which the male partner had a lower level of social capital than the female partner.

Source: BHPS, 1991-2008

[11]

Table n.6.7 Wilcoxon signed-ranks tests for social capital heterogeneity in seven types of families (measured through the most recent job), 2008, column percentages

	Social capital of the male partner – social capital of the female partner					
	MCPFs			FCPFs		
	Friendship social capital	Neighbour- hood social capital	Civic participation social capital	Friendship social capital	Neighbour- hood social capital	Civic participation social capital
<i>COFs</i>						
M>F	58.10%	57.14%	54.76%	55.96%	48.19%	36.27%
M<F	41.90%	42.86%	45.24%	44.04%	51.81%	63.73%
N	210	210	210	193	193	193
Z	-2.123 [*]	-2.930 ^{**}	-2.622 ^{**}	-1.648	-1.201	-3.421 ^{**}
<i>CMFs</i>						
M>F	63.95%	50.47%	53.02%	59.73%	53.24%	41.89%
M<F	36.05%	49.53%	46.98%	40.27%	46.76%	58.11%
N	430	430	430	370	370	370
Z	-5.868 ^{***}	-0.788	-1.978 [*]	-3.818 ^{***}	-1.770	-2.581 [*]
<i>CAFs</i>						
M>F	60.38%	55.97%	49.37%	62.40%	52.33%	46.51%
M<F	39.62%	44.03%	50.63%	37.60%	47.67%	53.49%
N	318	318	318	258	258	258
Z	-3.172 ^{**}	-1.854	-0.033	-4.185 ^{***}	-0.017	-0.640
<i>CHF</i> s						
	Friendship social capital	Neighbourhood social capital	Civic participation social capital			
M>F		60.92%		54.13%		49.54%
M<F		39.08%		45.87%		50.46%
N		545		545		545
Z		-4.464 ^{***}		-2.529 [*]		-0.118

Note:

i ^{*}: p<0.05; ^{**}: p<0.01; ^{***}: p<0.001.

ii 'M>F' denotes families in which the male partner had a higher level of social capital than

the female partner. 'M<F' denotes families in which the male partner a the lower level of social capital than the female partner.

iii These tests are all two-tailed.

iv None of the couples has the equivalent values of social capital factors.

Source: BHPS, 1991-2008

[12]

Table n.6.8 The Kruskal-Wallis tests and Jonckheere-Terpstra tests for differences and orders of median social capital heterogeneity in seven types of families (measured through the most recent job), 2008

	Social capital heterogeneity in MCPFs & CHFs: men – women ⁱ			Social capital heterogeneity in FCPFs & CHFs: women – men ⁱⁱ		
	Friendship social capital	Neighbourhood social capital	Civic participation social capital	Friendship social capital	Neighbourhood social capital	Civic participation social capital
<i>Median</i>						
CO						
Fs	0.083	0.108	0.096	-0.062	0.026	0.241
C						
MFs	0.116	0.004	0.039	-0.100	-0.038	0.102
CA						
Fs	0.099	0.060	-0.006	-0.097	-0.022	0.038
CH						
Fs	0.096	0.068	-0.003	-0.096	-0.068	0.003
<i>Kruskal-Wallis test</i>						
H	3.178	3.934	7.433	1.865	6.883	11.750**
df	3	3	3	3	3	3
<i>Jonckheere-Terpstra test</i>						
J ⁱⁱⁱ	403,343	407,389	384,628**	335,261	346,583*	357,875***
z	-0.497	-0.062	-2.509	-0.400	-1.812	-3.221
N	1503	1503	1503	1366	1366	1366

Note:

i The social capital heterogeneity was measured through subtracting the value of the female partner's social capital from the value of the male partner's social capital.

ii The social capital heterogeneity was measured through subtracting the value of the male partner's social capital from the value of the female partner's social capital.

iii The Jonckheere-Terpstra tests are one-tailed.

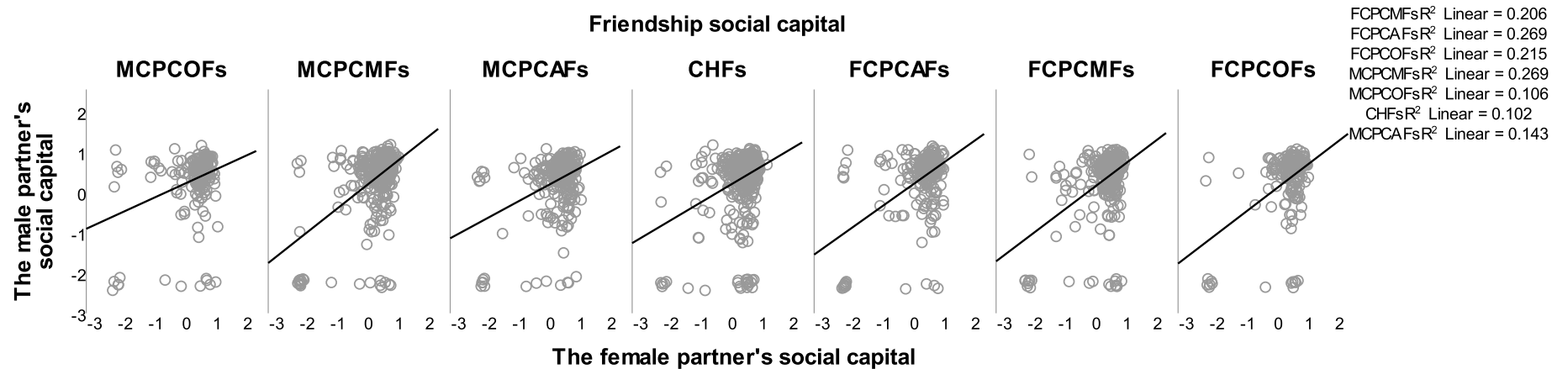
iv *: p<0.05, **: p<0.01, ***: p<0.001.

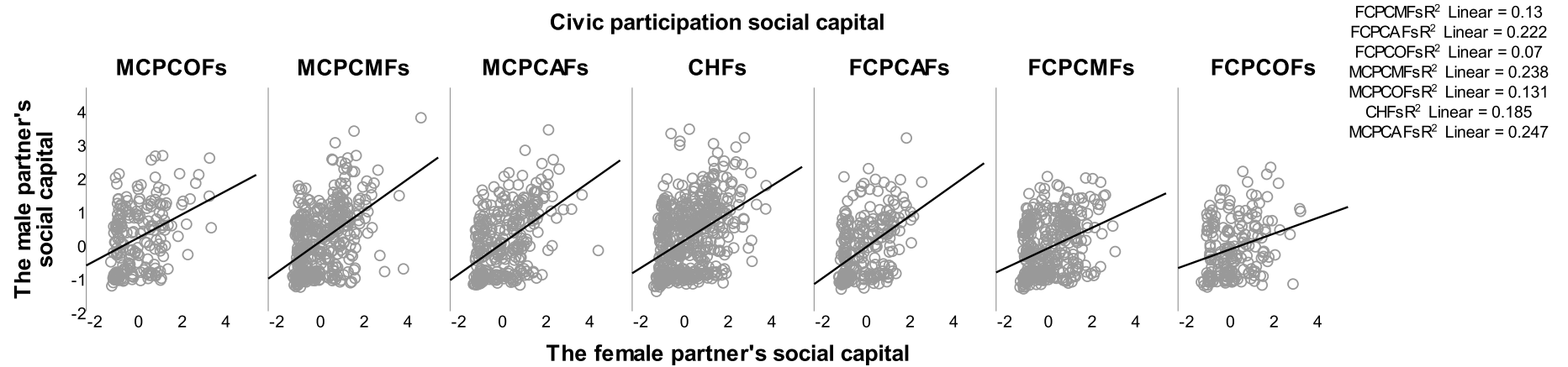
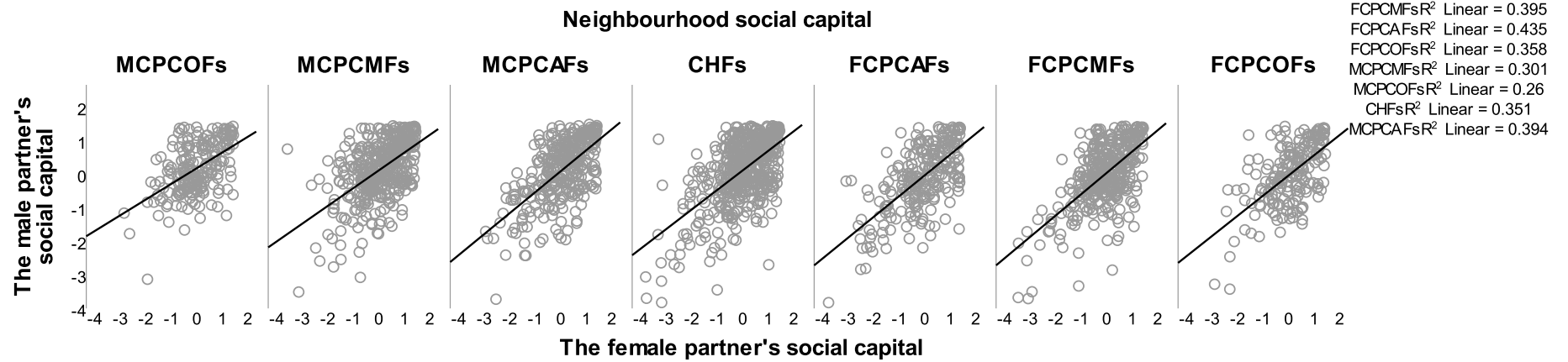
Source: BHPS, 1991-2008

Chapter Seven Social Capital Mutual Influences in Cross-class Families

[1]

Figure n.7.1 Scatterplots of the male and female partner's social capital by family types (measured through the most-recent-job version of the NS-SEC), 2008





Note:

Source: BHPS, 1991-2008

[2]

Table n.7.1 Spearman's correlation coefficients of the associations between the male and female partners' social capital in seven types of families (measured through the most-recent-job version of the NS-SEC), 2008

		Social capital of the female partner					
		MCPFs			FCPFs		
Social capital of the male partner		Friendship social capital	Neighbour- hood social capital	Civic participation social capital	Friendship social capital	Neighbour- hood social capital	Civic participation social capital
<i>COFs</i>							
Friendship social capital		0.167*	-0.015	0.036	0.186*	0.086	0.016
Neighbourhood social capital		0.000	0.462***	0.026	-0.001	0.559***	0.260***
Civic participation social capital		-0.042	-0.063	0.342***	0.009	0.183*	0.243**
<i>CMFs</i>							
Friendship social capital		0.234***	-0.107*	0.036	0.237***	-0.027	-0.061
Neighbourhood social capital		0.046	0.540***	0.141**	0.039	0.548***	0.088
Civic participation social capital		0.018	-0.007	0.473***	0.133*	0.073	0.359***
<i>CAFs</i>							
Friendship social capital		0.162**	-0.018	0.030	0.226***	-0.057	0.096
Neighbourhood social capital		0.138*	0.586***	0.228***	0.063	0.616***	0.196**
Civic participation social capital		0.142*	0.195***	0.501***	0.075	0.013	0.479***
		CHF's					
		Friendship social capital	Neighbourhood social capital	Civic participation social capital			

Friendship social capital	0.185 ^{***}	0.106 [*]	0.033
Neighbourhood social capital	0.076	0.501 ^{***}	0.248 ^{***}
Civic participation social capital	0.067	0.128 ^{**}	0.448 ^{***}

Note:

i All tests are two-tailed.

ii *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

Source: BHPS, 1991-2008

Chapter Eight The Occupations of the Female and Lower-class Partners Matter

[1]

Table n.8.1 Percentage of men and women's working hours, 2008, row percentage

	Current job ^v				Most recent job ^{vi}			
	FT ⁱ	PT ⁱⁱ	NPW ⁱⁱⁱ	(Weighted N)	FT	PT	NW ^{iv}	(Weighted N)
General								
Men	58.1	7.7	34.1	(6984.7)	82.8	12.5	4.7	(5178.7)
Women	31.8	22.0	46.3	(7957.6)	53.0	43.0	4.0	(5293.6)
p<.001, x ² (1.9)=1064.4				p<.001, x ² (2.0)=1077.8				
Marital status								
Married or cohabiting								
Men	62.3	6.5	31.2	(4751.6)	89.8	10.1	0.1	(3451.1)
Women	33.2	25.8	41.0	(4806.6)	52.0	46.6	1.4	(3408.5)
Others								
Men	49.4	10.2	40.4	(2228.2)	69.0	17.2	13.8	(1722.7)
Women	29.6	16.0	54.4	(3144.9)	54.8	36.4	8.7	(1879.3)
Age groups								
16-30								
Men	59.9	12.2	27.9	(1494.9)	67.1	16.2	16.7	(1375.4)
Women	45.1	22.8	32.1	(1586.6)	54.2	35.1	10.7	(1435.9)
31-45								
Men	86.5	4.8	8.6	(1782.9)	93.7	6.0	0.3	(1709.4)
Women	45.7	34.5	19.8	(1951.8)	54.2	44.7	1.1	(1803.8)
46-60								
Men	78.2	6.8	14.9	(1699.0)	90.9	8.8	0.3	(1542.8)
Women	44.1	25.6	30.3	(1932.1)	58.4	40.3	1.3	(1625.5)
61+								
Men	14.6	7.5	77.9	(2003.0)	66.4	33.3	0.4	(546.2)
Women	2.7	8.5	88.7	(2480.9)	23.6	72.5	4.0	(422.1)

Note:

- i. FT denotes working full-time;
- ii. PT denotes working part-time.
- iii. NPW denotes not in paid work.
- iv. NW denotes never worked.
- v. Working hours for current job is mainly derived from:

‘Employed full time’ variable (‘rjbft’) which consists of:

- ‘rjbhas’ (Can I just check, did you do any paid work last week – that is in the seven days ending last Sunday – either as an employee or self employed?),
 - ‘rjbhoff’ (Even though you weren’t working did you have a job that you were away from last week?),
 - ‘rjbsemp’ (Are you an employee or self-employed?),
 - ‘rjbhrs’ (Thinking about your (main) job, how many hours, excluding overtime and meal breaks, are you expected to work in a normal week?),
 - ‘rjbot’ (And how many hours overtime do you usually work in a normal week?),
 - ‘rjshrs’ (How many hours in total do you usually work a week in your job?),
- and

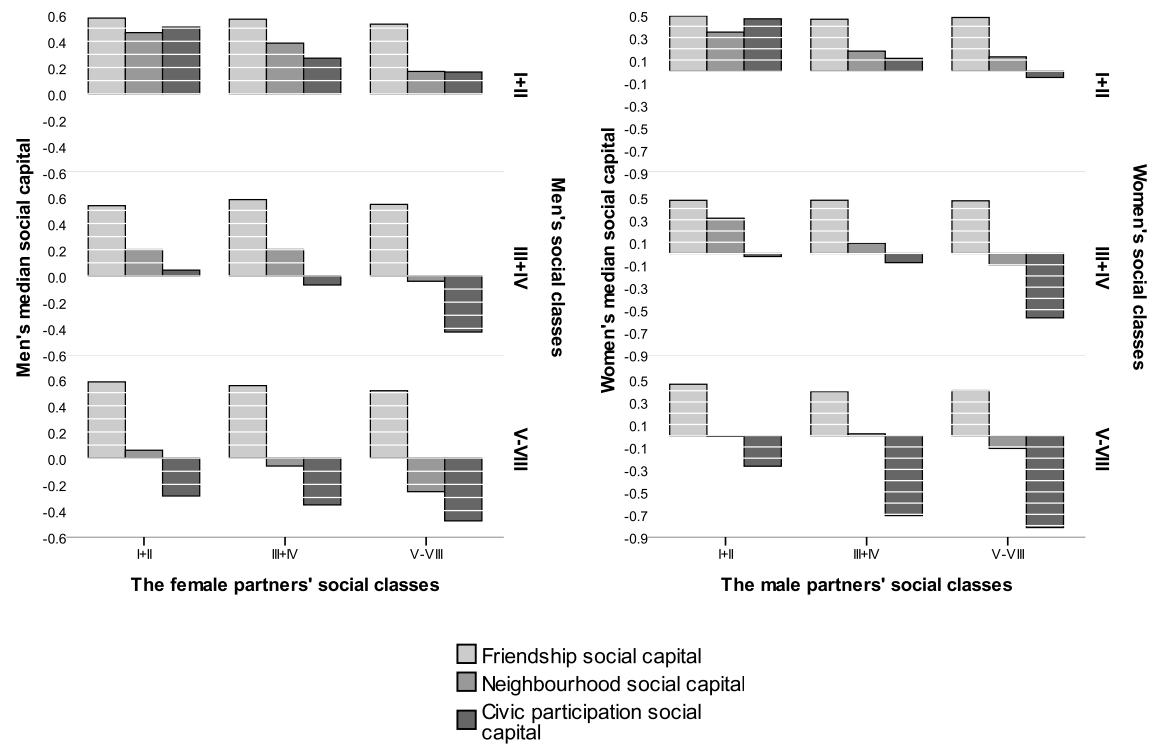
the answer by proxy, ‘rprijbft’ (Would you say (his/her) current job is part-time or full-time?).

- vi. Working hours for most recent job is derived from relevant information for current job and most recent job. If one was working in 2008, use the information provided for current job as present in ii. If one was not working in 2008 but had a job and a corresponding class position according to NS-SEC most recent job, ‘rmrjsec’, the information on working hours will be found in the most recent wave in which they were doing the work described by ‘rmrjsec’.

Source: BHPS, 1991-2008

[2]

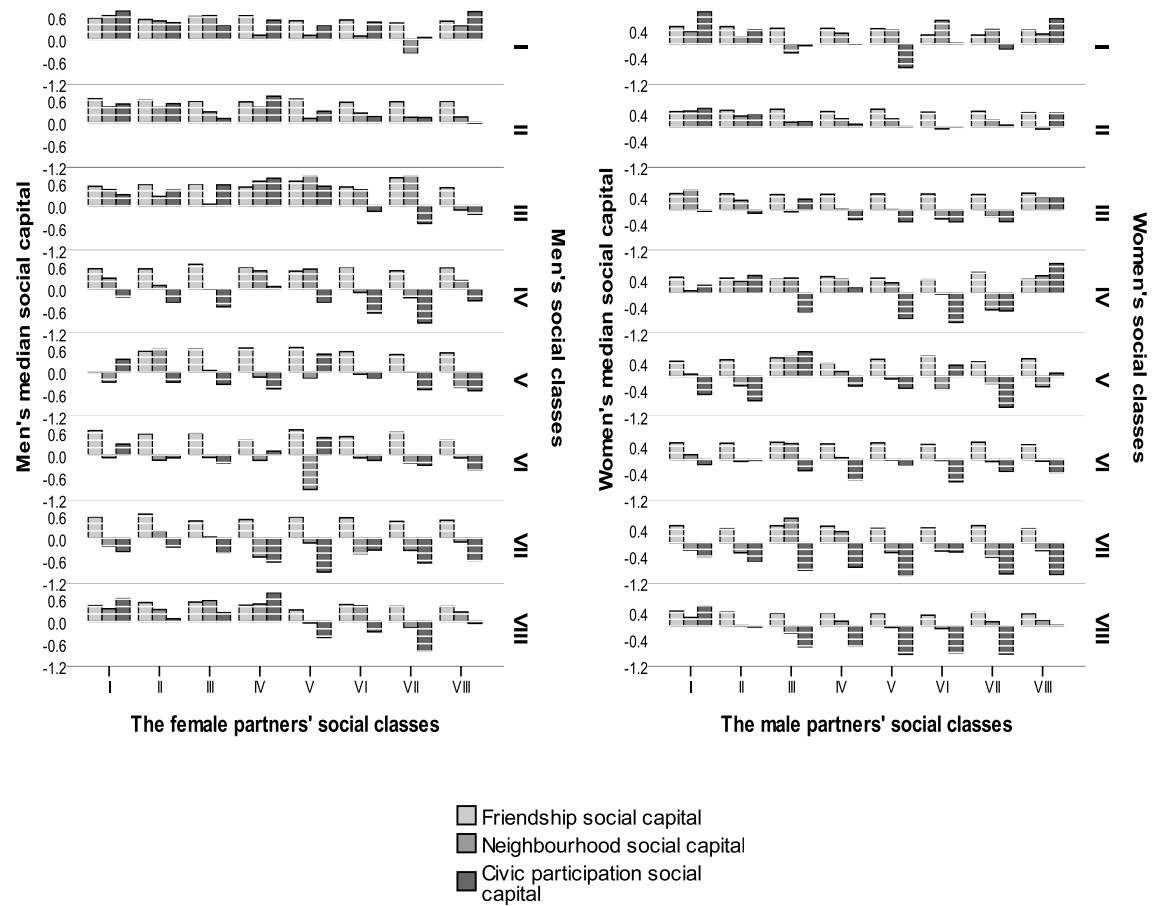
Figure n.8.1 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex (measured through the eight-class most-recent-job version of the NS-SEC), 2008



Source: BHPS, 1991-2008

[3]

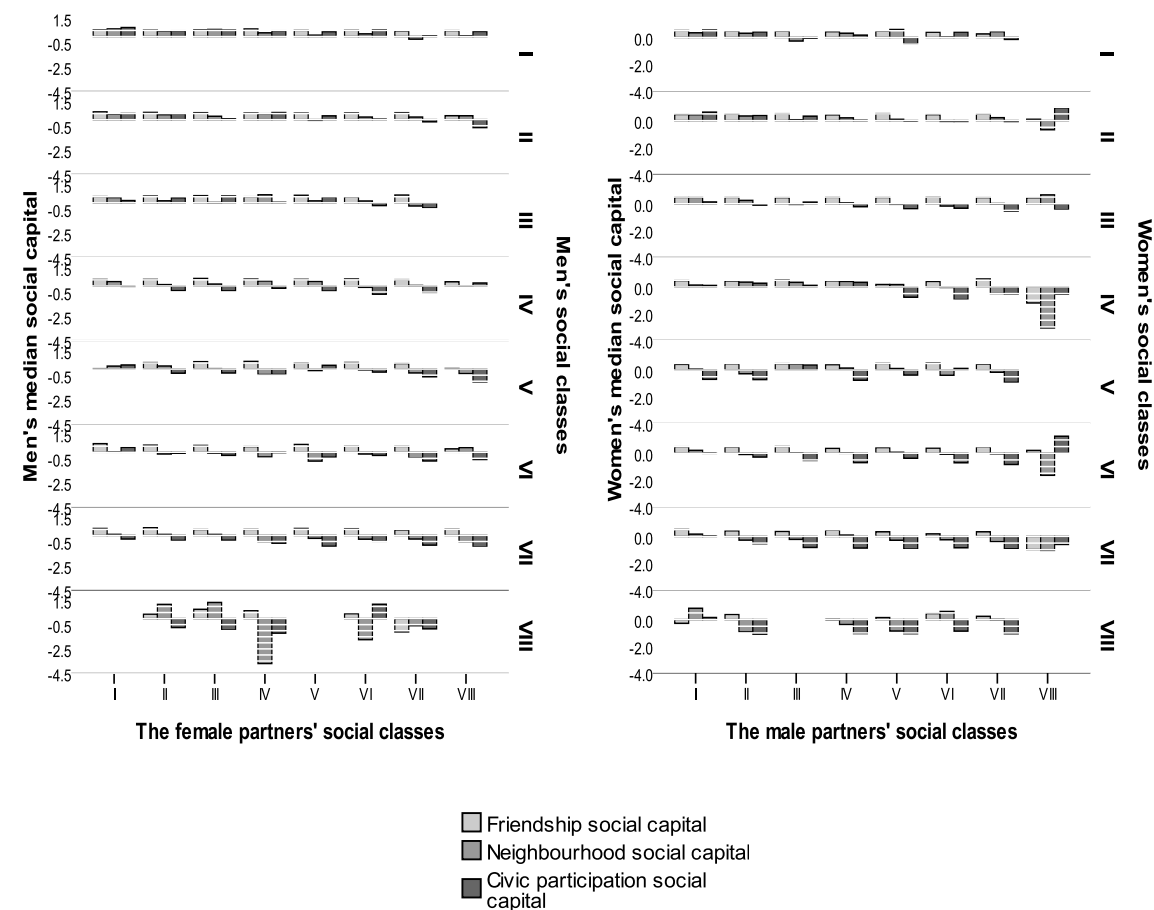
Figure n.8.2 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex (measured through the eight-class current-job version of the NS-SEC), 2008



Source: BHPS, 1991-2008

[4]

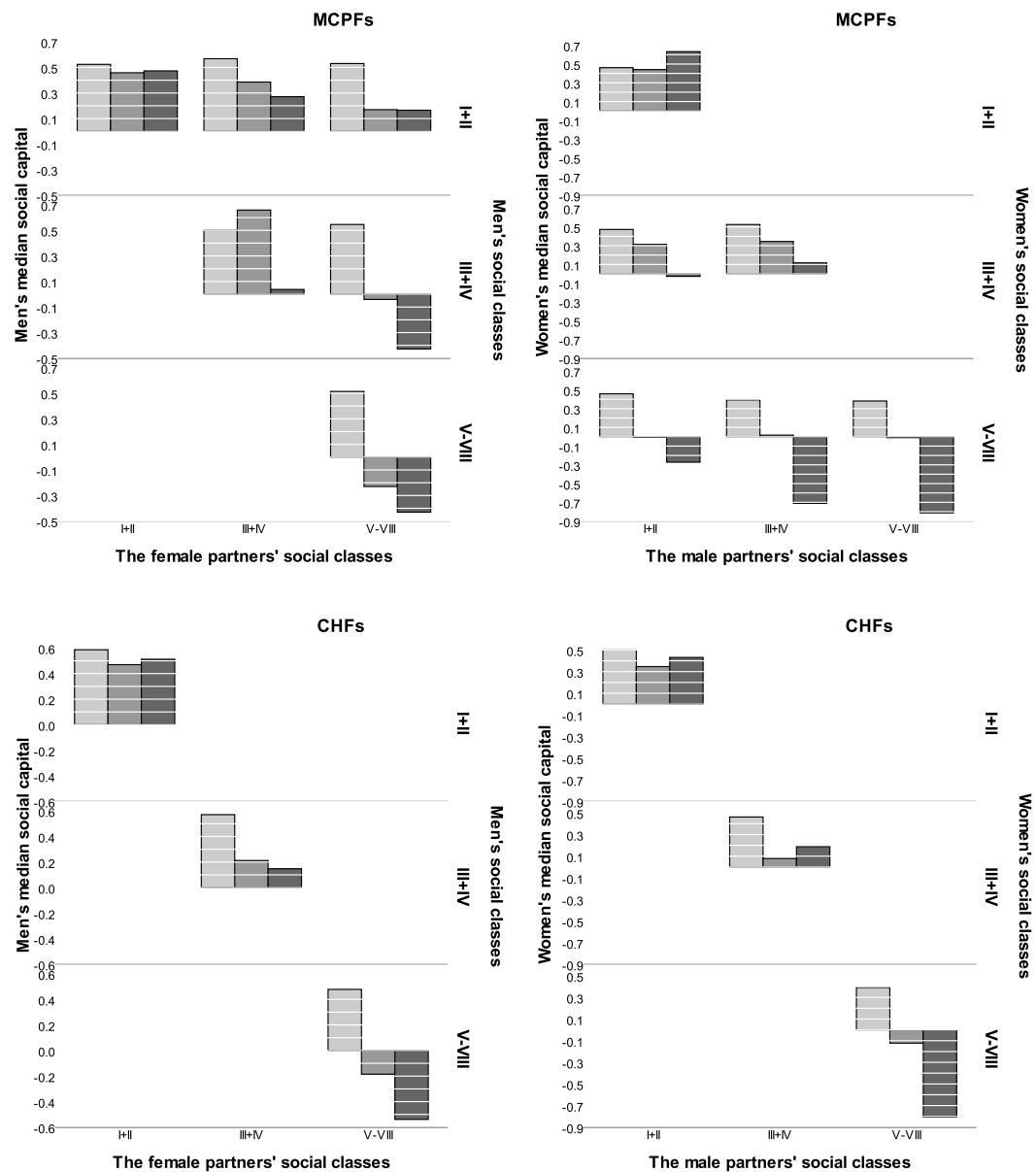
Figure n.8.3 Bar charts of the median social capital by their social classes by the social classes of their partners by sex (measured through the eight-class most-recent-job version of the NS-SEC), 2008

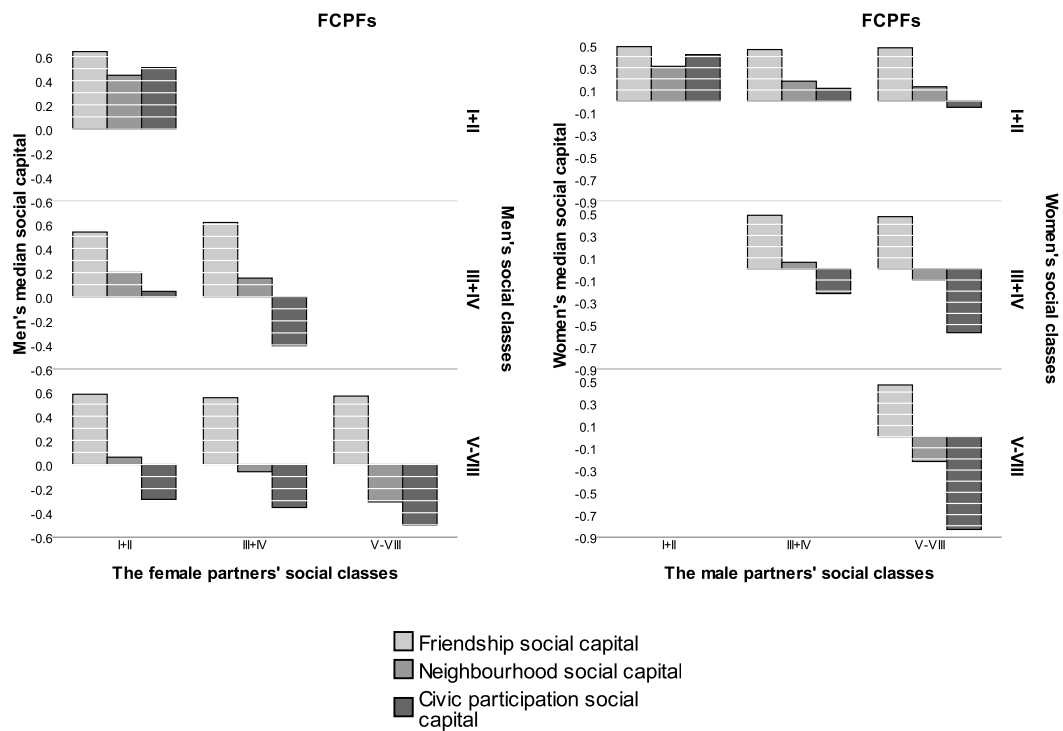


Source: BHPS, 1991-2008

[5]

Figure n.8.4 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class most-recent-job version of the NS-SEC), 2008





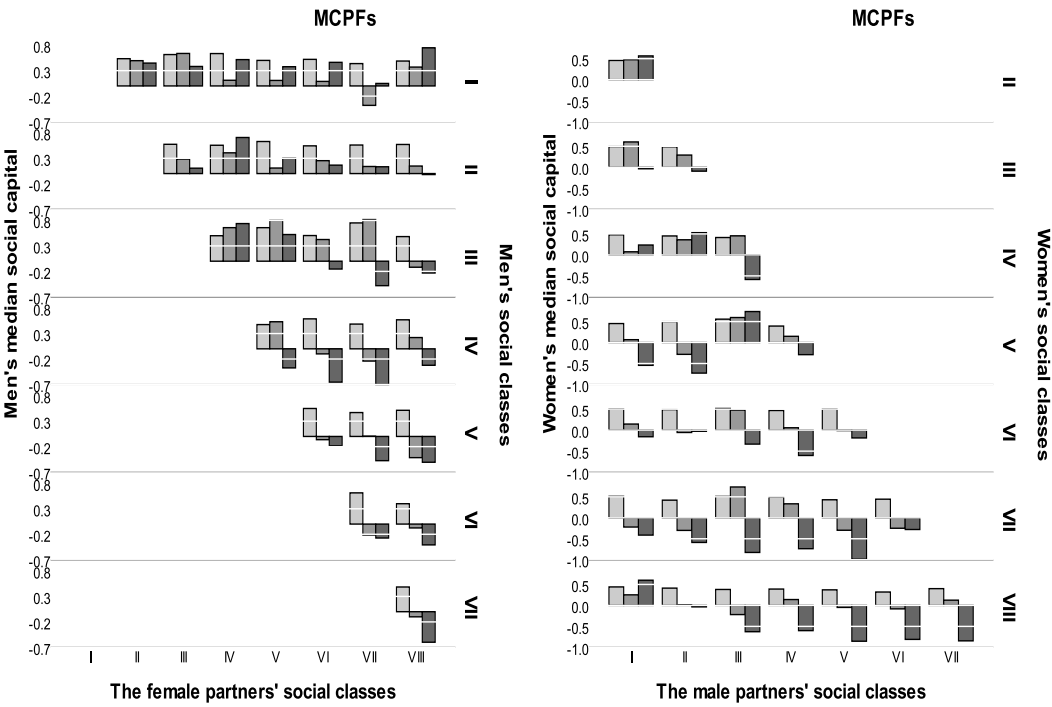
Note:

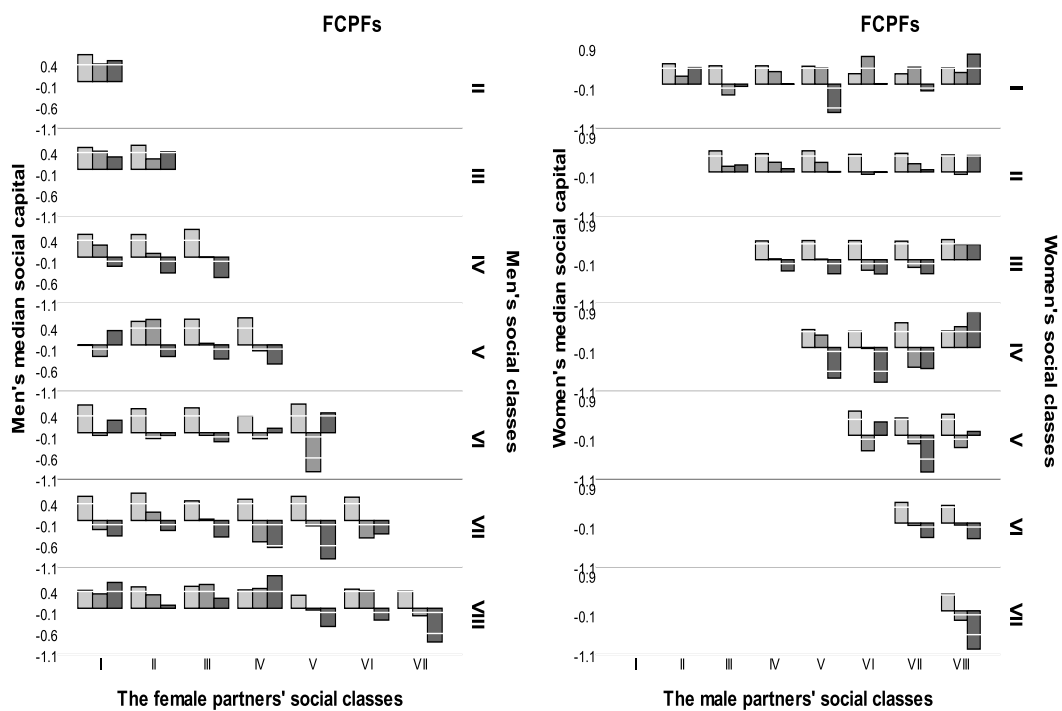
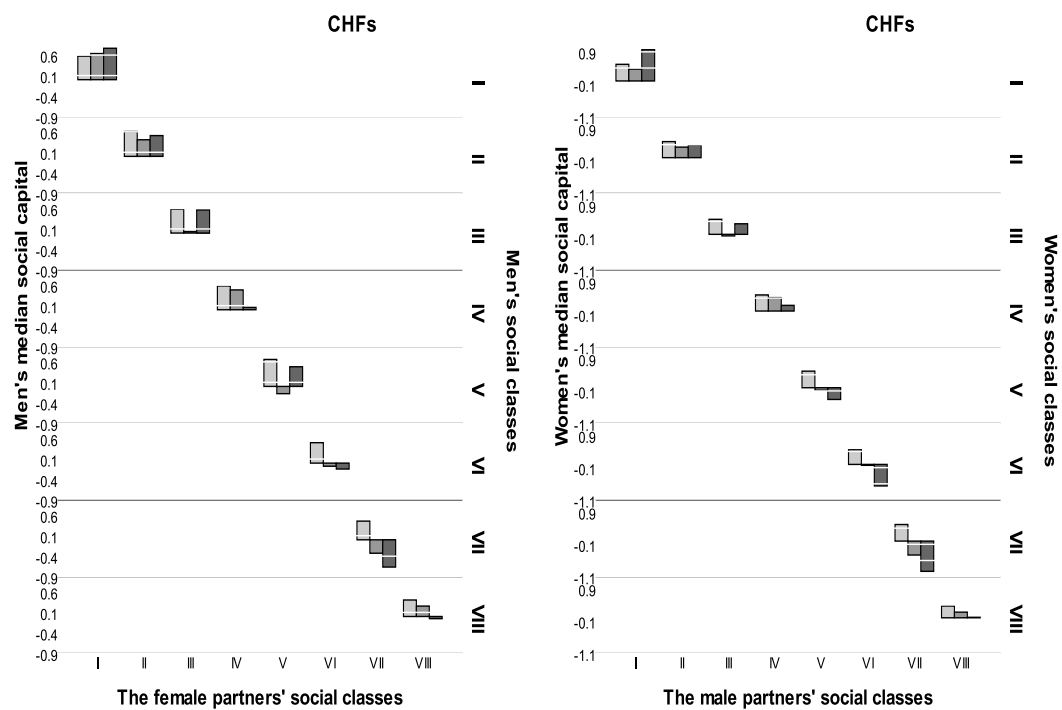
i Eight-class version is used to defined male-class-predominant families, female-class-predominant families and class-homogenous families. In the bar charts, the social classes of individuals are collapsed into three categories. The forward diagonals of two types of cross-class families are class-adjacent families.

Source: BHPS, 1991-2008

[6]

Figure n.8.5 Bar charts of the median social capital by their social classes by the social classes of their individuals by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class current-job version of the NS-SEC), 2008



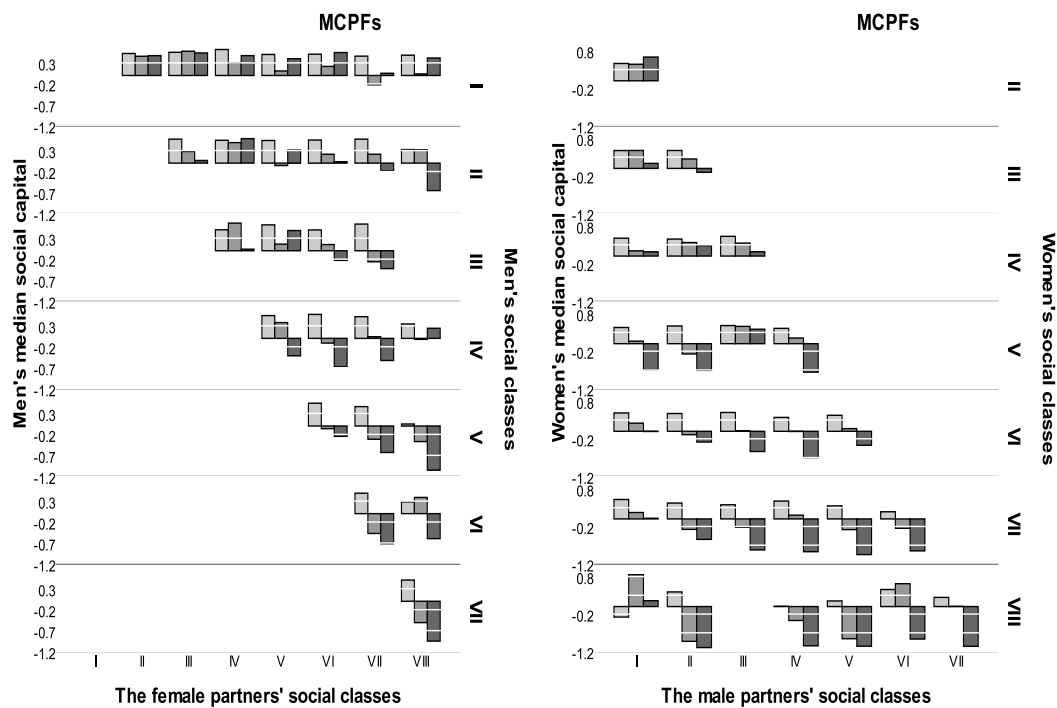


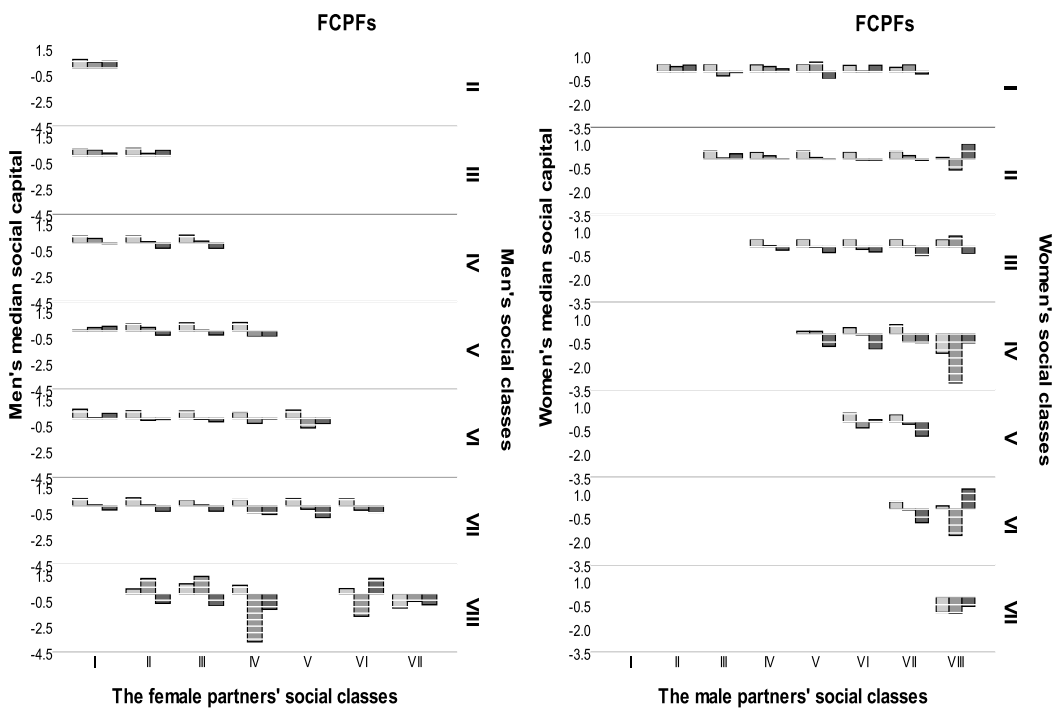
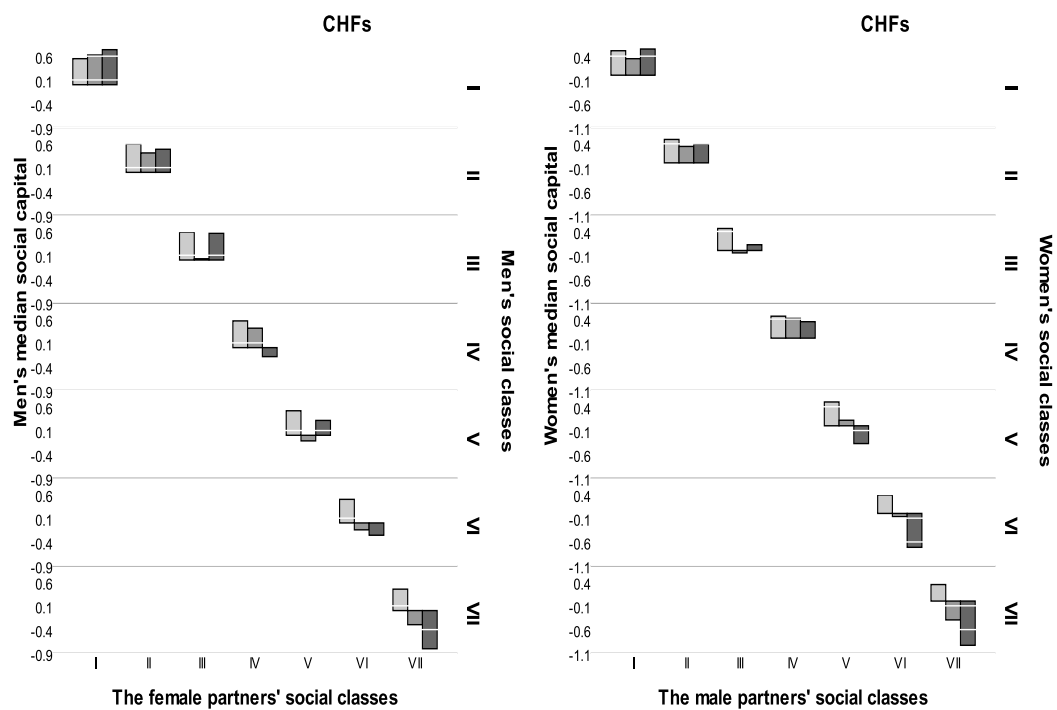
Friendship social capital
 Neighbourhood social capital
 Civic participation social capital

Source: BHPS, 1991-2008

[7]

Figure n.8.6 Bar charts of the median social capital of individuals by their social classes by the social classes of their partners by sex in male-class-predominant families, class-homogeneous families and female-class-predominant families (measured through the eight-class most-recent-job version of the NS-SEC), 2008





Friendship social capital
 Neighbourhood social capital
 Civic participation social capital

Source: BHPS, 1991-2008

[8]

Table n.8.2 MANOVA for the effects of own social classes and the male partners' social classes on women's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the most-recent-job version of the NS-SEC), 2008

		Women's social capital															
		Model 1				Model 2				Model 3				Model 4			
		Λ^i	F	df _M ⁱⁱ	df _R ⁱⁱ	Λ	F	df _M	df _R	Λ	F	df _M	df _R	Λ	F	df _M	df _R
<i>All families</i>																	
Women's social classes		0.885	16.548***	21	8021					0.925	9.619***	21	7351	0.942	7.242***	21	7222
Men's social classes						0.893	15.011***	21	7808	0.936	8.127***	21	7351	0.947	6.596***	21	7222
Women's social classes																	
class*Men's social														0.944	1.085	135	7538
classes																	
<i>MCPFs</i>																	
Women's social classes		0.852	9.666***	18	2993					0.957	2.558***	18	2976	0.974	1.512	18	2936
Men's social classes						0.855	9.458***	18	2993	0.961	2.360**	18	2976	0.981	1.113	18	2936
Women's social classes																	
class*Men's social														0.959	1.046	42	3080
classes																	
<i>CHFs</i>																	
Women's social																	
classes=Men's social		0.770	9.016***	18	1672	-	-	-	-	-	-	-	-	-	-	-	-
classes																	
<i>FCPFs</i>																	

Women's social classes	0.888	6.083***	18	2549					0.938	3.227***	18	2532	0.957	2.155**	18	2495
Men's social classes					0.916	4.439***	18	2549	0.968	1.626*	18	2532	0.975	1.227	18	2495
Women's social classes																
class*Men's social													0.944	1.307	39	2613
classes																

Note:

i Λ : Wilks' lambda (since explanatory variables in all models have more than two categories).

ii df_M : hypothesis degree of freedom; df_R : error degree of freedom.

iii *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

Source: BHPS, 1991-2008

[9]

Table n.8.3 MANOVA for the effects of own social classes and the female partners' social classes on men's social capital in all families, male-class-predominant families, class-homogenous families and female-class-predominant families (measured through the most-recent-job version of the NS-SEC), 2008

	Men's social capital															
	Model 1				Model 2				Model 3				Model 4			
	Λ^i	F	df _M ⁱⁱ	df _R ⁱⁱ	Λ	F	df _M	df _R	Λ	F	df _M	df _R	Λ	F	df _M	df _R
<i>All families</i>																
Men's social classes	0.858	20.124***	21	7719					0.889	14.344***	21	7231	0.955	5.421***	21	7102
Women's social classes					0.930	9.473***	21	7828	0.968	3.896***	21	7231	0.969	3.710***	21	7102
Men's social classes class*Women's social classes													0.951	0.938	135	7412
<i>MCPFs</i>																
Men's social classes	0.847	9.978***	18	2968					0.932	4.160***	18	2951	0.973	1.592	18	2911
Women's social classes					0.885	7.303***	18	2968	0.973	1.589	18	2951	0.984	0.937	18	2911
Men's social classes class*Women's social classes													0.972	0.710	42	3053
<i>CHFs</i>																
Men's social classes=Women's social classes	0.787	8.131***	18	1652	-	-	-	-	-	-	-	-	-	-	-	-
<i>FCPFs</i>																

Men's social classes	0.894	5.565***	18	2475				0.953	2.359**	18	2458	0.964	1.762*	18	2422	
Women's social classes					0.897	5.407***	18	2475	0.956	2.205**	18	2458	0.958	2.036**	18	2422
Men's social classes																
class*Women's social													0.958	0.952	39	2536
classes																

Note:

i Λ : Wilks' lambda (since explanatory variables in all models have more than two categories).

ii df_M : hypothesis degree of freedom; df_R : error degree of freedom.

iii *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$.

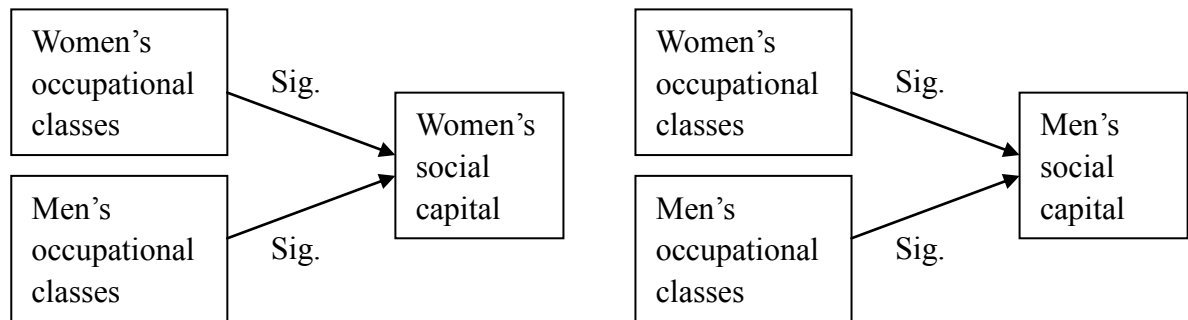
iv The most-recent-job version is in Note [7].

Source: BHPS, 1991-2008

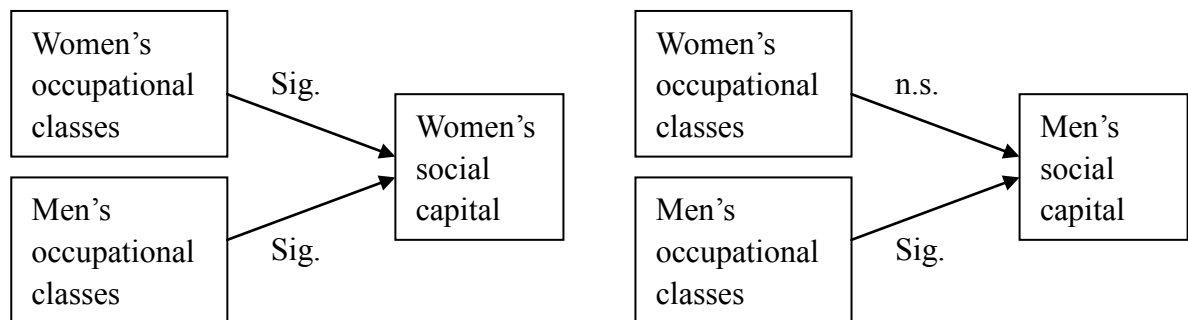
[10]

Figure n.8.7 A summary of Tables n.9.1 and n.9.2, the impacts of women and the lower-occupation partners' occupational classes on their own and their partners' social capital

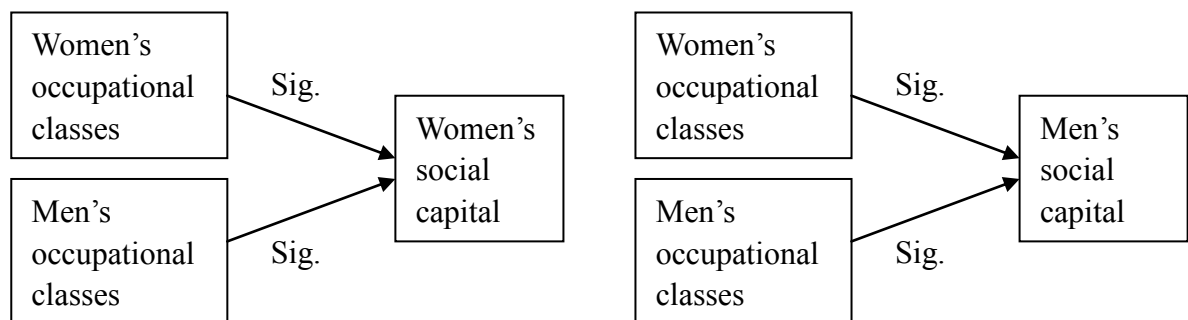
All Families



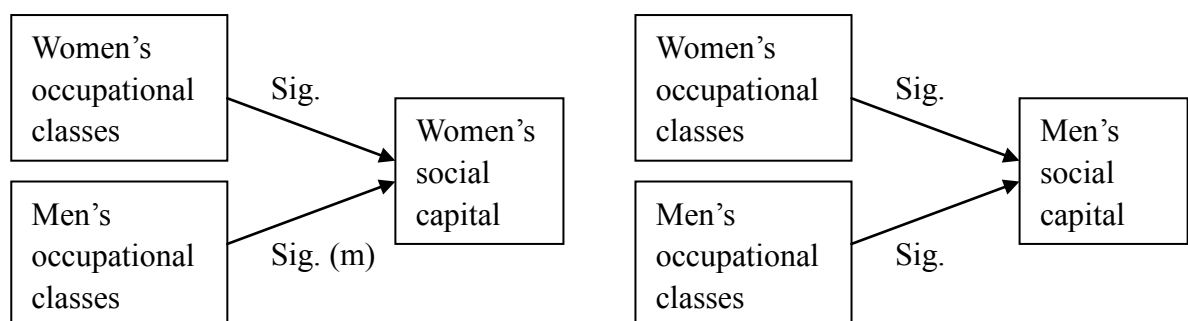
MCPFs



CHF's



FCPFs



Note:

- i Sig. denotes that the relationship between the explanatory variable and the outcome variables was significant.
 - ii Sig. (m) means that the relationship between the explanatory variable and the outcome variables was significant at a marginal level ($p < 0.05$).
 - iii n.s. denotes that the relationship between the explanatory variable and the outcome variables was not significant.
- Source:* BHPS, 1991-2008

GLOSSARY

I HMAP: Class I, higher managerial, administrative and professional occupations.

II LMAP: Class II, lower managerial, administrative and professional occupations.

III INT: Class III, intermediate occupations.

IV SEOA: Class IV, small employers and own account workers

V LST: Class V, lower supervisory and technical occupations

VI SROU: Class VI, semi-routine occupations

VII ROU: Class VII, routine occupations

VIII CNLF: Class VIII of the current-job NS-SEC, currently not in the labour force. It contains the never worked, retired, long-term unemployed, short-term unemployed, on temporary leave and full-time students.

VIII NW: Class VIII of the most-recent-job NS-SEC, the never worked

I+II: The service class, managerial and professional occupations

III+IV: The intermediate class, intermediate occupations

V-VIII: The working class, routine and manual occupations

BHPS: British Household Panel Survey

CAFs: Class-adjacent families. It refers to families do not cross any boundary of the threefold NS-SEC but do cross one or more boundaries of the eightfold NS-SEC.

CAMSIS: Cambridge social interaction and stratification scale

CARs: assets, capitals and resources

CCFs: Cross-class families. It refers to families consist of only one couple occupying different social class positions according to the eightfold NS-SEC and their dependent child(ren) if there is any. The couples are married or cohabiting. They are heterosexual couples who are adults and not dependent children of others.

CHFs: Class-homogenous families. It refers to families in which both the male partner and female partner were in the same social class position of the eightfold NS-SEC and their dependent child(ren) if there is any. The couples are married or cohabiting. They are heterosexual couples who are adults and not dependent children of others.

CMFs: Class-mixed families. It refers to families cross one boundary of the threefold NS-SEC.

COFs: Class-opposing families. It refers to families cross two boundaries of the threefold NS-SEC.

ESDS: the Economic and Social Data Service

ESRC: the Economic and Social Research Council

FCPFs: Female-class-predominant families. It refers to families in which the female partner occupies the higher class position than the male partner.

Formal social capital: It refers to social capital stored in relationships with members of organisations engaged in.

GCSEs: the General Certificate of Secondary Education examinations

GHS: General Household Survey

Informal social capital: It refers to social capital stored in relationships with friends and neighbours.

ISER: Institute for Social and Economic Research

MANOVA: Multivariate analysis of variance.

MCPFs: Male-class-predominant families. It refers to families in which the male partner occupies the higher class position than the female partner.

NS-SEC: National Statistics Socio-economic Classification. It is the social class scheme used to define 'cross-class'.

ONS: Office for National Statistics

OSM: The original sample members of the BHPS. They are the respondents of the first wave.

p: probability value

PAF: Postcode Address File

PASW: Predictive Analytics Software

SOC2000: Standard Occupational Classification 2000. It is a list of occupations which formed the basis of the NS-SEC.

Social capital: It refers to job seeking and promotion resources embedded in individuals' social networks through which the resources could be accessed and mobilised.

Social capital heterogeneity: It refers to the differences of social capital between two partners.

Social capital homogeneity: It refers to the similarities of social capital between two partners.

SPSS: Statistical Package for the Social Sciences

UKECHP: United Kingdom European Community Household Panel

YCS: Youth Cohort Study

APPENDIX

Codings of social capital indicators, and how they link to the BHPS questionnaire

	Indicators	Coding of indicators	Process of generating indicators from original variables in the BHPS	Original variables obtained from which wave(s) of the BHPS
FRIENDSHIP SOCIAL NETWORKS				
<i>Structural level</i>	Highest class in closest friends and parents	0=No information about the social class of the first closest friend and parents, and other inappropriate/missing answers; 1=Class VIII Never worked; 2=Class VII Routine occupations; 3=Class VI Semi-routine occupations; 4=Class V Lower supervisory and technical occupations; 5=Class IV Small	The original variable about the social class of the first closest friend is 'netsoc'. The question wording of this variable is as follows: '11a. Thinking now of your <u>first</u> friend, what is the name or title of your friend's current job? If this friend is not working, please give details of his/her last job. ...' 11b. What kind of work does (or did) this friend do most of the time?' This variable was, then, recoded into the NS-SEC eight-class version. The original variable about the social class of the father is 'rpasec'. It is derived from a	rnetsoc - Wave 18 wpaju, wpasoc, wpasoc00, wpasemp, wpaboss, and wpamngr – Waves 1, 8-18 wmaju, wmasoc, wmasoc00, wmasemp, wmaboss, and wmamngr – Waves 1, 8-18

<p>employers and own account workers;</p> <p>6=Class III Intermediate occupations;</p> <p>7=Class II Lower managerial, administrative and professional occupations;</p> <p>8=Class I Higher managerial, administrative and professional occupations.</p>	<p>series of variables: ‘rpaju’, ‘rpasoc’, ‘rpasoc00’, ‘rpasemp’, ‘rpaboss’, and ‘rpamngr’. ISER said that father’s class was also based on variable ‘rpasize’, but the variable could not be found in the questionnaire of wave 18 (ISER, 2011e). The question wording of this variable is as follows:</p> <p>‘D37 Thinking back to when you were 14 years old, what job was your father doing at that time? ...</p> <p>D38 Was he an employee or self-employed? ...</p> <p>D39 Did he work on his own or did he have employees? ...</p> <p>D40 Did he have any managerial duties or was he supervising any other employees?’</p>
--	--

The original variable about the social class of the mother is ‘rmasec’. It is derived from a series of variables: ‘rmaju’, ‘rmasoc’, ‘rmasoc00’, ‘rmasemp’, ‘rmaboss’, and ‘rmamngr’. ISER said that mother’s class was also based on variable ‘rmasize’, but the variable could not be found in the questionnaire of wave 18 (ISER, 2011f).

			<p>The question wording of this variable is as follows:</p> <p>‘D41 And what job was your mother doing when you were 14? ...</p> <p>D42 Was she an employee or self-employed? ...</p> <p>D43 Did she work on her own or did she have employees? ...</p> <p>D44 Did she have any managerial duties or was she supervising any other employees?’</p> <p>Since questions about father’s job and mother’s job were first asked in wave 1, and repeated in wave 8-17, answers in these waves are adopted if respondents did not give answers in Wave 18.</p> <p>Variables of the father’s social class and the mother’s social class were, then, recoded into the NS-SEC eight-class version.</p> <p>The classes of the mother, the father and the first closest friend are compared. The highest of the three is kept for this indicator.</p>
<i>Compositional</i>	% of male friends	Range (0, 1)	The original variables about the gender of rnetsx1/2/3,

quality

0=No male closest friend,
no closest friend, or other
inappropriate answers

the closest friends are 'rnetx1', 'rnetx2'
and 'rnetx3'. The question wording of this
variable is as follows:

'10. Here are a few questions about your
friends. Please choose the three people you
consider to be your closest friends starting
with the first friend. They should not
include people who live with you but they
can include relatives.

a) Is this friend? 1st friend: male, female; 2nd
friend: male, female; 3rd friend: male,
female.'

rnet1/2/3ag,

rnet1/2/3et,

rnet1/2/3jb,

rnet1/2/3kn,

rnet1/2/3lv,

rnet1/2/3ph,

rnet1/2/3rl,

rnet1/2/3wr

and

rnetsoc – Wave 18

Then, the number of male friends was
counted.

In the questionnaire, there are eight
questions about three closest friends. The
original variables are 'rnetx1/2/3',
'rnet1/2/3ag', 'rnet1/2/3et', 'rnet1/2/3jb',
'rnet1/2/3kn', 'rnet1/2/3lv', 'rnet1/2/3ph',
'rnet1/2/3rl', 'rnet1/2/3wr' and 'rnetsoc'. If
respondents answered any of the eight
question about the first, second or third
friend, it was regarded that the respondents
has the first, second or third friend. Then the

		total number of the closest friends was counted.	
		The result of the number of male friends divided by the total number of the closest friends is the value of this indicator.	
% of non-relative friends	Range (0, 1) 0=No closest friends who are non-kin, no closest friend, or other inappropriate answers	The original variables about the kinship between the respondents and their closest friends are 'rnet1wr', 'rnet2wr' and 'rnet3wr'. The question wording of this variable is as follows: '10. Here are a few questions about your friends. Please choose the three people you consider to be your closest friends starting with the first friend. They should <u>not</u> include people who live with you but they can include relatives. ... b) Is this person a relative? If YES please write in their relationship to you (eg mother, uncle, cousin) if not write in 'None': 1 st friend: Yes, No; 2 nd friend: Yes, No; 3 rd friend: Yes, No.'	rnetx1/2/3, rnet1/2/3ag, rnet1/2/3et, rnet1/2/3jb, rnet1/2/3kn, rnet1/2/3lv, rnet1/2/3ph, rnet1/2/3rl, rnet1/2/3wr and rnetsoc – Wave 18
		Then, the number of non-relatives in the closest friends was counted.	

The total number of the closest friends was counted in the same way as that for the indicator ‘% of men in friends’.

The result of the number of non-relatives in the closest friends divided by the total number of the closest friends is the value of this indicator.

% of white friends	Range (0, 1) 0=No white closest friends, no closest friend, or other inappropriate answers	The original variables about the race of the closest friends are ‘rnet1et’, ‘rnet2et’ and ‘rnet3et’. The question wording of this variable is as follows: ‘10. Here are a few questions about your friends. Please choose the three people you consider to be your closest friends starting with the first friend. They should <u>not</u> include people who live with you but they can include relatives. ... h) Which of these describes your friend’s ethnic group? 1 st friend: White, Asian, Black African, Black Caribbean, Chinese, Mixed, Any other; 2 nd friend: White, Asian, Black African, Black Caribbean, Chinese, Mixed, Any other; 3 rd friend: White, Asian,	rnet1/2/3, rnet1/2/3ag, rnet1/2/3et, rnet1/2/3jb, rnet1/2/3kn, rnet1/2/3lv, rnet1/2/3ph, rnet1/2/3rl, rnet1/2/3wr and rnetsoc – Wave 18
---------------------------	---	--	---

		Black African, Black Caribbean, Chinese, Mixed, Any other.'
		Then, the number of white friends in the closest friends was counted.
		The total number of the closest friends was counted in the same way as that for the indicator '% of men in friends'.
		The result of the number of white friends in the closest friends divided by the total number of the closest friends is the value of this indicator.
% of employed friends	Range (0, 1) 0=No employed closest friends, no closest friend, or other inappropriate answers	<p>The original variables about the employment status of the closest friends are 'rnet1jb', 'rnet2jb' and 'rnet3jb'. The question wording of this variable is as follows:</p> <p>'10. Here are a few questions about your friends. Please choose the three people you consider to be your closest friends starting with the first friend. They should <u>not</u> include people who live with you but they can include relatives. ...</p> <p>rnetsx1/2/3, rnet1/2/3ag, rnet1/2/3et, rnet1/2/3jb, rnet1/2/3kn, rnet1/2/3lv, rnet1/2/3ph, rnet1/2/3rl, rnet1/2/3wr and rnetsoc – Wave 18</p>

g) Which of these best describes what your friend does? 1st friend: Full time employment, Part time employment, Unemployed, Full time education, Full time housework, Fully retired; 2nd friend: Full time employment, Part time employment, Unemployed, Full time education, Full time housework, Fully retired; 3rd friend: Full time employment, Part time employment, Unemployed, Full time education, Full time housework, Fully retired.'

Then, the number of employed friends was counted.

The total number of the closest friends was counted in the same way as that for the indicator '% of men in friends'.

The result of the number of employed friends divided by the total number of the closest friends is the value of this indicator.

<i>Size</i>	N. of friends	Range (0, 3) 0=No closest friend, or inappropriate answers	In the questionnaire, there are eight rnetx1/2/3, questions about three closest friends. The rnet1/2/3ag, original variables are 'rnetx1/2/3', rnet1/2/3et,
-------------	----------------------	--	---

				<p>‘rnet1/2/3ag’, ‘rnet1/2/3et’, ‘rnet1/2/3jb’, rnet1/2/3jb, ‘rnet1/2/3kn’, ‘rnet1/2/3lv’, ‘rnet1/2/3ph’, rnet1/2/3kn, ‘rnet1/2/3rl’, ‘rnet1/2/3wr’ and ‘rnetsoc’. If rnet1/2/3lv, respondents answered any of the eight rnet1/2/3ph, questions about the first, second or third rnet1/2/3rl, friend, it was regarded that the respondents rnet1/2/3wr and have the first, second or third friend. The rnetsoc – Wave 18 total number of the closest friends is the value of this indicator.</p>
Length of relationship	Length of relationship with the 1 st /2 nd /3 rd friend	<p>0=No closest friend 1=Less than one year 2=One to two years 3=Three to ten years 4=10 years or more</p>	<p>The original variable is ‘rnet1/2/3kn’. The question wording of this variable is as follows: ‘10. Here are a few questions about your friends. Please choose the three people you consider to be your closest friends starting with the first friend. They should <u>not</u> include people who live with you but they can include relatives. ... d) About how long have you known him or her? 1st friend: Less than 1 year, 1-2 years, 3-10 years, 10 years or more; 2nd friend: Less than 1 year, 1-2 years, 3-10 years, 10 years or more; 3rd friend: Less than 1 year, 1-2 years, 3-10 years, 10 years or more.’</p>	<p>rnetx1/2/3, rnet1/2/3ag, rnet1/2/3et, rnet1/2/3jb, rnet1/2/3kn, rnet1/2/3lv, rnet1/2/3ph, rnet1/2/3rl, rnet1/2/3wr and rnetsoc – Wave 18</p>

			Respondents who did not answer any of the questions about closest friends ('rnet1/2/3', 'rnet1/2/3ag', 'rnet1/2/3et', 'rnet1/2/3jb', 'rnet1/2/3kn', 'rnet1/2/3lv', 'rnet1/2/3ph', 'rnet1/2/3rl', 'rnet1/2/3wr' and 'rnet1/2/3soc') are coded 0.
<i>Frequency of contact</i>	Frequency of contact with the 1st/2nd/3rd friend	0=No closest friend 1=Less often 2=At least once a month 3=At least once a week 4=Most days	The original variable is 'rnet1/2/3ph'. The question wording of this variable is as follows: '10. Here are a few questions about your friends. Please choose the three people you consider to be your closest friends starting with the first friend. They should <u>not</u> include people who live with you but they can include relatives. ... e) How often do you see or get in touch with your friend either by visiting, writing or by telephone? 1 st friend: Most days, At least once week, At least once a month, Less often; 2 nd friend: Most days, At least once week, At least once a month, Less often; 3 rd friend: Most days, At least once week, At least once a month, Less often.'
			rnet1/2/3, rnet1/2/3ag, rnet1/2/3et, rnet1/2/3jb, rnet1/2/3kn, rnet1/2/3lv, rnet1/2/3ph, rnet1/2/3rl, rnet1/2/3wr and rnet1/2/3soc – Wave 18
			Respondents who did not answer any of the

				questions about closest friends ('rnetsx1/2/3', 'rnet1/2/3ag', 'rnet1/2/3et', 'rnet1/2/3jb', 'rnet1/2/3kn', 'rnet1/2/3lv', 'rnet1/2/3ph', 'rnet1/2/3rl', 'rnet1/2/3wr' and 'rnetsoc') are coded 0.
<i>Level of help</i>	Help with job seeking	0=No 1=Not sure 2=Yes		The original variable is 'qxsupb'. The question wording of this variable is as follows: '5. If you had any of the following problems, is there anyone you could rely on to help you from <u>outside</u> your own household? ... b) If you needed help finding a job for yourself or a member of your family: Yes, No, Not sure.'
NEIGHBOURHOOD SOCIAL NETWORKS				
<i>Structural level</i>	Graffiti in neighbourhood	1=Very common 2=Fairly common 3=Not very common 4=Not at all common		The original variable is 'qcrgraf'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. a) Graffiti on walls or buildings: Very

			common, Fairly common, Not very common, Not at all common, Don't know.'	
Teenagers neighbourhood	in	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qcrteen'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... b) Teenagers hanging around in streets: Very common, Fairly common, Not very common, Not at all common, Don't know.'	qcrteen – Wave 17
Drunks/tramps neighbourhood	in	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qcrdrnk'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... c) Drunks or tramps on the streets: Very common, Fairly common, Not very common, Not at all common, Don't know.'	qcrdrnk – Wave 17
Vandalism	in	1=Very common	The original variable is 'qcrvand'. The	qcrvand – Wave 17

neighbourhood	2=Fairly common 3=Not very common 4=Not at all common	question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... d) Vandalism and deliberate damage to property: Very common, Fairly common, Not very common, Not at all common, Don't know.'
Racial attacks in neighbourhood	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qrrace'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... e) Insults or attacks to do with someone's race or colour: Very common, Fairly common, Not very common, Not at all common, Don't know.'
Burglar in neighbourhood	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qrburg'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this

			card and tell me how common or uncommon each of the following things is in your area. ... f) Homes broken into: Very common, Fairly common, Not very common, Not at all common, Don't know.'	
Car damage in neighbourhood	in	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qrcar'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... g) Cars broken into or stolen: Very common, Fairly common, Not very common, Not at all common, Don't know.'	qrcar – Wave 17
Mugging in neighbourhood	in	1=Very common 2=Fairly common 3=Not very common 4=Not at all common	The original variable is 'qrmugg'. The question wording of this variable is as follows: 'RD25 SHOWCARD 25 Please look at this card and tell me how common or uncommon each of the following things is in your area. ... h) People attacked on the streets: Very	qrmugg – Wave 17

				common, Fairly common, Not very common, Not at all common, Don't know.'
<i>Compositional quality</i>	N/A			
<i>Size</i>	N/A			
<i>Length of relationship</i>	Length of residence	of	Range (1, 83)	<p>The original variable is 'rplnowy4'. The question wording of this variable is as follows: '(Next / I'd like to start with some) questions about yourself and where you live. ... D7. In what month and year did you move here?' Only the year is used.</p> <p>Since this question was first asked in wave 1, and repeated in wave 2-17, answers in these waves are adopted if respondents did not give the answer in Wave 18.</p>
<i>Frequency of contact</i>	Frequency of contact with neighbours	of	0=Never 1=Less often than once a month 2=Once or twice a month 3=Once or twice a week 4=On most days	<p>The original variable is 'rfrna'. The question wording of this variable is as follows: 'RV12 How often do you talk to any of your neighbours? Is it ... On most days, Once or twice a week, Once or twice a month, Less</p>

often than once a month, Never.’					
<i>Level of help</i> N/A					
CIVIC PARTICIPATION SOCIAL NETWORKS					
<i>Structural level</i>	The org. with the highest class score of which the respondent was a member	Range (0, 6.90) 0=Not a member of any organisation	<p>The organisation membership information was obtained through variables used for the indicator ‘N. of org. member of’ below.</p> <p>The respondents’ social class was obtained through the variable ‘qmrjsec’. It was recoded into the most-recent-job version of the NS-SEC. The coding for the respondents’ social class (Classes I to VIII) is the same as that of the indicator ‘Highest class in closest friends and parents’ as above.</p> <p>Then, the distribution of members’ social class was summarised in a frequency table for each organisation. Every frequency table shows the proportion of members in each class in one organisation. The higher the proportion was, the more likely the members met people in such social class. Thus, the proportion could be regarded as the weight of social class.</p>	qorgma, qorgmc, qorgme, qorgmg, qorgmq, qorgmh, qorgmj, qorgml, qorgmm, and qmrjsec – Wave 17	qorgmb, qorgmd, qorgmf, qorgmp, qorgmo, qorgmi, qorgmk,

For each organisation, the coding of each social class was multiplied by the corresponding proportion of members, then added up. The sum for each organisation is the mean social class of its members. It is also the class score of the organisation. The highest class score of the organisations of which the respondent was the member is the value of this indicator.

The org. with the highest class score in which the respondent was active	Range (0, 6.91) 0=Not active in any organisation	The calculation process is the same as that of the indicator 'Highest class score of org. member of' above. The only difference is variables of organisations of which the respondent was the member was replaced by variables of organisations in which the respondent was active. The organisation information was obtained through variables used for the indicator 'N. of org. active in' below.	qorgaa, qorgac, qorgae, qorgag, qorgaq, qorgah, qorgaj, qorgal, qorgam, and qmrjsec – Wave 17	qorgab, qorgad, qorgaf, qorgap, qorgao, qorgai, qorgak,
---	---	--	---	---

Compositional quality N/A

<i>Size</i>	N. of org. of which the respondent was	Range (0, 7) 0=Not a member of any	In the questionnaire, there are two questions about the organisation membership. The	qorgma, qorgmc,	qorgmb, qorgmd,
-------------	---	---------------------------------------	--	-----------------	-----------------

a member	organisation	<p>wording of these two questions is as follows:</p> <p>‘RV41 SHOWCARD 51 Are you currently a <u>member</u> of any of the kinds of organisations on this card? Yes, No.</p> <p>RV42 Which ones? PROBE: ‘Any others?’ until ‘No’ CODE ALL THAT APPLY ON GRID BELOW. Member: a) Political party; b) Trade Unions; c) Environmental group; d) Parents’/School Association; e) Tenants’/Residents’ Group or Neighbourhood Watch; f) Religious group or church organisation; g) Voluntary services group; h) Pensioners group/organisation; i) Scouts/Guides organisation; j) Professional organisation; k) Other community or civic group (GIVE DETAILS); l) Social Club/Working men’s club; m) Sports Club; n) Women’s Institute/Townswomen’s Guild; o) Women’s Group/Feminist Organisation; p) Other group or organisation (GIVE DETAILS); q) None.’</p> <p>Answers to the second question will be used. The corresponding variables of the sixteen organisations are: ‘qorgma’,</p>	<p>qorgme, qorgmf, qorgmg, qorgmp, qorgmq, qorgmo, qorgmh, qorgmi, qorgmj, qorgmk, qorgml, and qorgmm – Wave 17</p>
-----------------	--------------	--	---

‘qorgmb’, ‘qorgmc’, ‘qorgmd’, ‘qorgme’,
‘qorgmf’, ‘qorgmg’, ‘qorgmp’, ‘qorgmq’,
‘qorgmo’, ‘qorgmh’, ‘qorgmi’, ‘qorgmj’,
‘qorgmk’, ‘qorgml’, and ‘qorgmm’.

The total number of organisations of which
the respondent was the member is the value
of this indicator.

N. of org. in which the respondent was active	Range (0, 7) 0=Not active in any organisation	In the questionnaire, there are two questions about the organisations in which the respondent was active. The wording of these two questions is as follows: ‘RV41 SHOWCARD 51 Are you currently a <u>member</u> of any of the kinds of organisations on this card? Yes, No. RV42 Which ones? PROBE: ‘Any others?’ until ‘No’ CODE ALL THAT APPLY ON GRID BELOW. Activities: a) Political party; b) Trade Unions; c) Environmental group; d) Parents’/School Association; e) Tenants’/Residents’ Group or Neighbourhood Watch; f) Religious group or church organisation; g) Voluntary services group; h) Pensioners group/organisation; i) Scouts/Guides	qorgaa, qorgac, qorgae, qorgag, qorgaq, qorgah, qorgaj, qorgal, and qorgam – Wave 17	qorgab, qorgad, qorgaf, qorgap, qorgao, qorgai, qorgak,
--	---	--	--	---

				<p>organisation; j) Professional organisation; k) Other community or civic group (GIVE DETAILS); l) Social Club/Working men's club; m) Sports Club; n) Women's Institute/Townswomen's Guild; o) Women's Group/Feminist Organisation; p) Other group or organisation (GIVE DETAILS); q) None.'</p> <p>Answers to the second question will be used. The corresponding variables of the sixteen organisations are: 'qorgaa', 'qorgab', 'qorgac', 'qorgad', 'qorgae', 'qorgaf', 'qorgag', 'qorgap', 'qorgaq', 'qorgao', 'qorgah', 'qorgai', 'qorgaj', 'qorgak', 'qorgal', and 'qorgam'.</p> <p>The total number of the organisations in which the respondent was active of is the value of this indicator.</p>
<i>Length of relationship</i>	N/A			
<i>Frequency of contact</i>	Frequency attending meetings	of org.	0=Never/almost never 1=Once a year/less 2=Several times a year 3=At least once a month	<p>The original variable is 'rlactk'. The question wording of this variable is as follows:</p> <p>'RV10 SHOWCARD 50 We are interested</p>

		4=At least once a week	in the things people do in their leisure time, I'm going to read out a list of some leisure activities. Please look at the card and tell me how frequently you do each one. ... j) Attend meetings for local groups/voluntary organisations: At least once a week, At least once a month, Several times a year, Once a year or less, Never/almost never.'	
Frequency of doing voluntary work		0=Never/almost never 1=Once a year/less 2=Several times a year 3=At least once a month 4=At least once a week	The original variable is 'rlactl'. The question wording of this variable is as follows: 'RV10 SHOWCARD 50 We are interested in the things people do in their leisure time, I'm going to read out a list of some leisure activities. Please look at the card and tell me how frequently you do each one. ... k) Do unpaid voluntary work: At least once a week, At least once a month, Several times a year, Once a year or less, Never/almost never.'	rlactl – Wave 18
Frequency of attending religious activities		0=Never/practically never 1=Only at weddings, funerals etc.	The original variable is 'roprlg2'. The question wording of this variable is as follows:	roprlg2 – Wave 18

2=Less often but at least once a year	‘RV92 How often, if at all, do you attend religious services or meetings? Once a week or more, Less often but at least once a month, Less often but at least once a year, Never or practically never, Only at weddings, funerals etc.’
3=Less often but at least once a month	
4=Once a week/more	

<i>Level of help</i>	N/A
----------------------	-----

BIBLIOGRAPHY

Abbott, P. (1987) Women's social class identification: does husband's occupation make a difference? **Sociology**, 21 (1): 91-103.

Abbott, P. and Sapsford, R. (1987) **Women and social class**. London and New York: Tavistock Publications.

Acker, J. (1973) Women and social stratification: a case of intellectual sexism. **The American Journal of Sociology**, 78 (4): 936-945.

Acker, J. (1980) Women and stratification: a review of recent literature. **Contemporary Sociology**, 9 (1): 25-35.

Allan, G. and Crow, G. (1993) **Community life**. Brighton: Harvester.

Allan, G. (1996) **Kinship and friendship in modern Britain**. Oxford: Oxford University Press.

Allan, S. (1982) "Gender inequality and class formation." In Giddens, A. and Mackenzie, G. (eds.) **Social class and the division of labour**. Cambridge: Cambridge University Press.

Barber, B. (1957) **Social stratification: a comparative analysis of structure and process**. New York: Harcourt, Brace.

Baxter, J. (1988) Gender and class analysis: the position of women in the class structure. **Journal of Sociology**, 24 (1): 106-123.

Beggs, J.J. and Hurlbert, J.S. (1997) The social context of men's and women's job search ties: voluntary organization memberships, social resources, and job search outcomes. **Sociological Perspectives**, 40 (4): 601-622.

Blau, P.M., Blum, T.C. and Schwartz, J.E. (1982) Heterogeneity and intermarriage. **American Sociological Review**, 47 (1): 45-62.

Borgatti, S.P., Jones, C. and Everett, M.G. (1998) Network measures of social capital. **Connections**, 21 (2): 27-36.

Bourdieu, P. (1979) **Distinction: a social critique of the judgement of taste**. Translated by

- Nice, R. (1987) Harvard: Harvard University Press.
- Bourdieu, P. (1983) "The form of capital." Translated by Nice, R. (1986) In Richardson, J.C. (ed.) **Handbook of theory and research for the sociology of education**. New York: Greenwood Press. pp.241-258.
- Bozon, M. and Heran, F. (1989) Finding a spouse: a survey of how French couples meet. **Population: An English Selection**, 44 (1): 91-121.
- Brass, D.J. (1985) Men's and women's networks: a study of interaction patterns and influence in an organization. **Academy of Management Journal**, 28 (2): 327-343.
- Briggs, X.S. (1998) Brown kids in White suburbs: housing mobility and the many faces of social capital. **Housing Policy Debate**, 9 (1): 177-221.
- Britten, N. and Heath, A. (1983) "Women, men and social class." In Gamarnikow, E., Morgan, D.H.J. and Purvis, J. et al. (eds.) **Gender, Class and Work**. London: Heinemann. pp.46-60.
- Bryman, A. and Cramer, D. (2009) **Quantitative data analysis with SPSS 14, 15 & 16: a guide for social scientists**. East Sussex and New York: Routledge.
- Brynin, M., Longhi, S. and Pérez Á.M. (2009a) "The social significance of homogamy." In Brynin, M. and Ermisch, J. (eds.) **Changing Relationships**. New York: Routledge. pp. 73-92.
- Brynin, M., Pérez, Á.M. and Longhi, S. (2009b) "How close are couples?" In Brynin, M. and Ermisch, J. (eds.) **Changing Relationships**. New York: Routledge. pp. 93-108.
- Bulmer, M. (1986) **Neighbours: the work of Philip Abrams**. Cambridge: Cambridge University Press.
- Burt, R.S. (1983) **Corporate profits and cooptation**. New York: Academic Press.
- Burt, R.S. (1992) **Structural holes: the social structure of competition**. Cambridge, MA: Harvard University Press.
- Burt, R.S. (2001) "Structural holes versus network closure as social capital." In Lin, N., Cook, K. and Burt, R.S. (eds.) **Social Capital: Theory and Research**. New York: Walter de Gruyter. pp. 31-56.
- Campbell, K.E. and Rachel, A.R. (1986) "Job search and job mobility: sex and race differences." In Simpson, I.H. and Simpson R.L. (eds.) **Research in the Sociology of**

- Work, Vol. 3.** Greenwich: JAI Press. pp.147-174.
- Carling, A.H. (1991) **Social division.** London, New York: Verso. pp.253-298.
- Cattell, R.B. (1966) The scree test for the number of factors. **Multivariate Behavioral Research**, 1 (2): 245-276.
- Centers, R. (1949) Marital selection and occupational strata. **The American Journal of Sociology**, 54 (6): 530-535.
- Chan, T.W. and Goldthorpe, J.H. (2004) Is there a status order in contemporary British society? **European Sociological Review**, 20 (5): 383-401.
- Coleman, J.S. (1990) **The foundation of social theory.** Cambridge, MA: Harvard University Press.
- Cooper, A. (1982) "Sex, gender and society." In Reid, I. and Wormald, E. (eds.) **Sex differences in Britain.** London: Grant McIntyre.
- Crompton, R. (2008) **Class and stratification.** 3rd ed. Cambridge and Malden: Polity Press.
- Davis, K. (1949) **Human society.** New York: Macmillan.
- De Graaf, N.D. and Heath, A. (1992) Husbands' and wives' voting behaviour in Britain: class-dependent mutual influence of spouses. **Acta Sociologica**, 35 (4): 311-322.
- Delphy, C. (1981) "Women in stratification studies." In Roberts, H. (ed.) **Doing feminist research.** London: Routledge and Kegan Paul. pp.114-128.
- Delphy, C. (1984) **Close to home: a materialist analysis of women's oppression.** London: Hutchinson.
- Devine, F. (1997) **Social class in America and Britain.** Edinburgh: Edinburgh University Press.
- Diamond, I. and Jefferies, J. (2001) **Beginning statistics: an introduction for social scientists.** London, Thousand Oaks, New Delhi: SAGE Publications.
- Dinitz, S., Banks, F. and Pasamanick, B. (1960) Mate selection and social class: changes during the past quarter century. **Marriage and Family Living**, 22 (4): 348-351.
- Duke, V. and Edgell, S. (1987) The operationalisation of class in British sociology: theoretical and empirical considerations. **The British Journal of Sociology**, 38 (4):

445-463.

- Edgell, S. (1993) **Class: key ideas**. London: Routledge.
- Eichler, M. (1980) **The double standard: a feminist critique of feminist social science**. London: Croom Helm.
- Erikson, R. (1984) Social class of men, women and families. **Sociology**, 18 (4): 500-514.
- Erikson, R. and Goldthorpe, J.H. (1992) **The constant flux: a study of class mobility in industrial societies**. Oxford: Oxford University Press.
- Evans, G. (1988) On tests of validity and social class: why Prandy and Blackburn are wrong. **Sociology**, 32 (1): 189-202.
- Evans, G. (1992) Testing the validity of the Goldthorpe class schema. **European Sociological Review**, 8 (3): 211-32.
- Evans, G. (1996) Putting men and women into classes: an assessment of the cross-sex validity of the Goldthorpe class schema. **Sociology**, 30 (2): 209-234.
- Evans, G. and Mills, C. (1998) Identifying class structure: a latent class analysis of the criterion-related and construct validity of the Goldthorpe class schema. **European Sociological Review**, 14 (1): 87-106.
- Evans, G. and Mills, C. (2000) In search of the wage-labour/service contract: new evidence on the validity of the Goldthorpe class schema. **British Journal of Sociology**, 51 (4): 641-661.
- Field, A. (2009) **Discovering statistics using SPSS (and sex and drugs and rock 'n' roll)**. 3rd ed. Los Angeles, London, New Delhi, Singapore and Washington DC: SAGE.
- Foley, M.W. and Edwards, B. (1999) Is it time to disinvest in social capital? **Journal of Public Policy**, 19 (2): 141-173.
- Fox, A.J. and Adelstein, A.M. (1978) Occupational mortality: work or way of life? **Journal of Epidemiology and Community Health**, 32: 73-78.
- Fox, A.J. and Goldblatt, P.O. (1982) **Longitudinal study: socio-demographic mortality differentials: a first report on mortality in 1971-1975 according to 1971 Census characteristics, based on data collected in the OPCS Longitudinal Study, Series LS, number 1**. London: Her Majesty's Stationary Office.

- Freeman, L.C. (1979) Centrality in social networks: conceptual clarification. **Social Networks**, 1 (3): 215-239.
- Garnsey, E. (1978) Women's work and theories of class stratification. **Sociology**, 12 (2): 223-243.
- Garson, G.D. ([2006, 2008] 2009) **Multivariate GLM, MANOVA, and MANCOVA** [online]. Available from: <http://faculty.chass.ncsu.edu/garson/PA765/manova.htm> [Accessed 5 August 2011].
- Giddens, A. (1973) **The class structure of the advanced societies**. London: Hutchinson.
- Glass, G.V., Peckham, P.D. and Sanders, J.R. (1972) Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. **Review of Educational Research**, 42 (3): 237-288.
- Glenn, N.D., Hoppe, S.K. and Weiner, D. (1974) Social class heterogamy and marital success: a study of the empirical adequacy of a textbook generalization. **Social Problem**, 21 (4): 539-550.
- Goldthorpe, J.H. (1983) Women and class analysis: in defence of the conventional view. **Sociology**, 17 (4): 465-488.
- Goldthorpe, J.H. (1984) Women and class analysis: a reply to the replies. **Sociology**, 18 (4): 491-499.
- Goldthorpe, J.H. (2000) **On sociology: numbers, narratives, and the integration of research and theory**. Oxford: Oxford University Press. pp.206-229.
- Goldthorpe, J.H. in collaboration with Llewellyn, C. and Payne, C. ([1980] 1987) **Social Mobility and Class Structure in Modern Britain**. Oxford: Clarendon Press.
- Goldthorpe, J.H. and Payne, C. (1986) On the class mobility of women: results from different approaches to the analysis of recent British data. **Sociology**, 20 (4): 531-555.
- Graetz, B. (1991) The class location of families: a refined classification and analysis. **Sociology**, 25 (1): 101-118.
- Granovetter, M. (1973) The strength of weak ties. **American Journal of Sociology**, 78 (6): 1360-1380.
- Grusky, D.B. and Ku, M.C. (2008) "Gloom, doom, and inequality." In Grusky, D.B. (ed.) **Social Stratification: Class, Race, and Gender in Sociological Perspective**. 3rd ed.

- Colorado: Westview Press. pp. 2-28.
- Haavio-Mannila, E. (1969) Some consequences of women's emancipation. **Journal of Marriage and the Family**, 31 (1): 123-34.
- Hakim, C. (2003) **Models of the family in modern societies: ideals and realities**. Hants, England and Burlington, USA: Ashgate.
- Hall, P. (1999) Social capital in Britain. **British Journal of Political Science**, 29 (3): 417-461.
- Hall, P.A. (2002) "Great Britain: the role of government and the distribution of social capital." In Putnam, R.D. (ed.) **Democracies in Flux: The Evolution of Social Capital in Contemporary Society**. Oxford: Oxford University Press.
- Hayes, B.C. and Miller, R.L. (1993) The silenced voice: female social mobility patterns with particular reference to the British Isles. **British Journal of Sociology**, 44 (4): 653-672.
- Hays, J. (2008) **Cultural revolution – enemies and horrors** [online]. Available from: <http://factsanddetails.com/china.php?itemid=67> [Accessed 31 January 2012].
- Heath, A. (1981) **Social mobility**. Glasgow: Fontana Paperbacks.
- Heath, A. and Britten, N. (1984) Women's jobs do make a difference: a reply to Goldthorpe. **Sociology**, 18 (4): 475-490.
- Hout, M. (1982) The association between husbands' and wives' occupations in two-earner families. **American Journal of Sociology**, 88 (2): 397-409.
- Hunt, T.C. (1940) Occupational status and marriage selection. **American Sociological Review**, 5 (4): 495-504.
- Hutcheson, G. and Sofroniou, N. (1999) **The multivariate social scientist**. London, California and New Delhi: SAGE.
- Institute for Social and Economic Research (ISER) (2011a) **RNET1WR – Whether 1st closest friend is relation** [online]. Available from: <http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp16.html#RNET1WR> [Accessed 24 March 2011].
- ISER (2011b) **RNET1RL – Relationship of 1st closest friend to R** [online]. Available from: <http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp16.html#RNET1RL> [Accessed 24 March 2011].

- ISER (2011c) **RNET2RL – Relationship of 2nd closest friend to R** [online]. Available from:
<http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp16.html#RNET2RL> [Accessed 24 March 2011].
- ISER (2011d) **RNET3RL – Relationship of 3rd closest friend to R** [online]. Available from:
<http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp17.html#RNET3RL> [Accessed 24 March 2011].
- ISER (2011e) **RPASEC – Socio-Economic Class: father's job** [online]. Available from:
<http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp20.html#RPASEC> [Accessed 27 March 2011].
- ISER (2011f) **RMASEC – Socio-Economic Class: mother's job** [online]. Available from:
<http://www.iser.essex.ac.uk/survey/bhps/documentation/volb/wave18/rindresp20.html#RMASEC> [Accessed 27 March 2011].
- Jacobs, J.A. and Furstenberg Jr. F.F. (1986) Changing places: conjugal careers and women's marital mobility. **Social Forces**, 64 (3): 714-732.
- Jamieson, L. (1998) **Intimacy: personal relationships in modern societies**. Cambridge: Polity.
- Johnson, M.P. and Leslie, L. (1982) Couple involvement and network structure: a test of the dyadic withdrawal hypothesis. **Social Psychology Quarterly**, 45 (1): 34-43.
- Jones, G. (1990) "Marriage partners and their class trajectories." In Payne, G. and Abbott, P. (eds.) **The social mobility of women: beyond male mobility models**. London, New York, Philadelphia: The Falmer Press. pp. 91-108.
- Jones, F.L. and Davis, P. (1988) Class structuration and patterns of social closure in Australia and New Zealand. **Sociology**, 22 (2): 271-291.
- Jorgensen, S.R. (1977) Social class heterogamy, status striving, and perceptions of marital conflict: a partial replication and revision of Pearlin's contingency hypothesis. **Journal of Marriage and Family**, 39 (4): 653-661.
- Jorgensen, S.R. and Klein, D.M. (1979) Sociocultural heterogamy, dissensus, and conflict in marriage. **The Pacific Sociological Review**, 22 (1): 51-75.
- Kahl, J.A. (1957) **The American class structure**. New York: Rinehart.

- Kaiser, H.F. (1960) The application of electronic computers to factor analysis. **Educational and Psychological Measurement**, 20 (1): 141-151.
- Kaiser, H.F. (1974) An index of factorial simplicity. **Psychometrika**, 39 (1): 31-36.
- Kalmijn, M. (1991) Status homogamy in the United States. **American Journal of Sociology**, 97 (2): 496-523.
- Kalmijn, M. (1994) Assortative mating by cultural and economic occupational status. **American Journal of Sociology**, 100 (2):422-452.
- Kalmijn, M. (1998) Intermarriage and homogamy: causes, patterns, trends. **Annual Review of Sociology**, 24: 395-421.
- Kalmijn, M. (2003) Shared friendship networks and the life course: an analysis of survey data on married and cohabiting couples. **Social Networks**, 25: 231-249.
- Kalmijn, M. and Bernasco, W. (2001) Joint and separated lifestyles in couple relationships. **Journal of Marriage and Family**, 63 (3): 639-654.
- Kalmijn, M. and Flap, H. (2001) Assortative meeting and mating: unintended consequences of organized settings for partner choices. **Social Forces**, 79 (4): 1289-1312.
- Kline, P. ([1993] 2000) **Handbook of psychological testing**. 2nd ed. London and New York: Routledge.
- Korn, E.L. and Graubard, B.I. (1995) Examples of differing weighted and unweighted estimates from a sample survey. **The American Statistician**, 49 (3): 291-295.
- Lambert, P.S. (2006) **The British Household Panel Survey: introduction to a longitudinal data resource: working paper 2 of 'longitudinal data analysis for social science researchers', 18 September 2006**. London: ESRC Research Development Initiative training programme.
- Lambert, P. (2008) **CAMSIS: social interaction and stratification scale** [online]. Available from <http://www.camsis.stir.ac.uk/> [Accessed 26 August 2012].
- Laumann, E.O. (1970) Editor's foreword. **Sociological Inquiry**, 40 (2): 3-12.
- Leiulfsrud, H. and Woodward, A. (1987) Women at class crossroads: repudiating conventional theories of family class. **Sociology**, 21 (3): 393-412.
- Leiulfsrud, H. and Woodward, A.E. (1988) Review essay: cross-class families. **Acta**

Sociologica, 31 (2): 175-179.

Lenski, G. (1966) **Power of privilege**. New York: McGraw-Hill.

Li, Y., Savage, M. and Pickles, A. (2003a) Social capital and social exclusion in England and Wales (1972-1999). **British Journal of Sociology**, 54 (4): 497-526.

Li, Y., Pickles, A. and Savage, M. (2003b) "Conceptualising and measuring social capital: a new approach." In **British Household Panel Survey Conference. Essex, 3-5 July 2003.**

Li, Y., Pickles, A. and Savage, M. (2005) Social capital and social trust in Britain. **European Sociological Review**, 21 (2): 109-123.

Li, Y. (2010) "Measuring social capital: formal and informal activism, its socio-demographic determinants and socio-political impacts." In Bulmer, M., Gibbs, J. and Hyman, L. (eds.) **Social measurement through social surveys: an applied approach**. Surrey and Burlington: Ashgate Publishing Limited and Ashgate Publishing Company. pp.173-194.

Lin, N. (1999) Social networks and status attainment. **Annual review of sociology**, 25 (1): 467-487.

Lin, N. (2000) Inequality in social capital. **Contemporary Sociology**, 29 (6): 785-795.

Lin, N. (2001) **Social capital: a theory of social structure and action**. Cambridge and New York etc.: Cambridge University Press.

Lin, N. ([2001] 2005) "Building a network theory of social capital." In Lin, N., Cook, K. And Burt, R.S. (eds.) **Social capital: theory and research**. New Brunswick and London: Aldine Transaction. pp.3-29.

Machonin, P. (1970) Social stratification in contemporary Czechoslovakia. **American Journal of Sociology**, 75 (5): 725-741.

Marshall, G., Robert, S. and Burgoyne, C. (1996) Social class and under class in Britain and the USA. **British Journal of Sociology**, 47 (1): 22-44.

Marshall, G., Rose, D., and Newby, H. et al. ([1988] 1993) **Social class in modern Britain**. London: Routledge.

McPherson, J.M. and Smith-Lovin, L. (1982) Women and weak ties: differences by sex in the size of voluntary organization. **American Journal of Sociology**, 87 (4): 883-904.

- McRae, S. (1986) **Cross-class families: a study of wives' occupational superiority**. Oxford: Oxford University Press.
- Miller, R.L. and Hayes, B.C. (1990) "Gender and intergenerational mobility." In Payne, G. and Abbott, P. (eds.) **The social mobility of women: beyond male mobility models**. London, New York, Philadelphia: The Falmer Press. pp. 53-63.
- Moody, C.D. Sr. (1983) On becoming a superintendent: contest or sponsored mobility? **Journal of Negro Education**, 52 (4): 383-397.
- Moore, G. (1990) Structural determinants of men's and women's personal networks. **American Sociological Review**, 55 (5): 726-735.
- Murgatroyd, L. (1982) Gender and occupational stratification. **The Sociological Review**, 30 (4): 574-602.
- Oakley, A. (1981) **Subject women**. London: Martin Robertson.
- Office for National Statistics (ONS). (1998) **The ESRC review of government social classifications**. London and Swindon: crown copyright.
- ONS (2001) **Social capital: a review of the literature**. Crown copyright.
- ONS. (2005a) **Labour market trends**, 113 (7). Crown copyright. pp.261-308.
- ONS. (2005b) **The national statistics socio-economic classification: origins, development and use**. Hampshire and New York: Palgrave macmillan. Crown copyright.
- ONS. (2007) **Overview of families: cohabiting is fastest growing family type** [online]. Available from: <http://www.statistics.gov.uk/CCI/nugget.asp?ID=1865&Pos=4&ColRank=2&Rank=160> [Accessed 27 August 2010].
- ONS. (2009) **Number of cohabiting couples projected to rise in England and Wales** [online]. Available from <http://www.statistics.gov.uk/pdfdir/marr0309.pdf> [Accessed 27 August 2010].
- ONS. (2000) **Social trends 30**. Crown copyright.
- ONS. (2011a) **Social trends 41: household and families**. Crown copyright.
- ONS. (2011b) **Social trends 41: labour market**. Crown copyright.

- Osborn, A.F. and Morris, T.C. (1979) The rationale for a composite index of social class and its evaluation. **British Journal of Sociology**, 30 (1): 39-60.
- Pahl, R. and Wallace, C. (1985) "Household work strategies in economic recession." In Mingione, E. and Redclift, N. (eds.) **Beyond employment**. Oxford: Blackwell.
- Pahl, R.E. (1993) Does class analysis without class theory have a promising future?: a reply to Goldthorpe and Marshall. **Sociology**, 27 (2): 253-258.
- Parkin, F. (1971) **Class inequality and political order**. London: MacGibbon and Kee.
- Parsons, T. (1953) "A revised analytical approach to the theory of social strtification." In Bendix, R. and Lipset, S.M. (eds.) **Class, status, and power**. Glencoe, Illinois: Free Press.
- Parsons, T. (1954) **Essays in sociological theory**. Glencoe: Free Press. pp.69-88.
- Paxton, P. (1999) Is social capital declining in the United States? A multiple indicator assessment. **American Journal of Sociology**, 105 (1): 88-127.
- Payne, G. and Abbott, P. (1990) **The social mobility of women: beyond male mobility models**. London, New York and Philadelphia: The Falmer Press.
- Pearson, J. (1983) Mothers and daughters: measuring occupational inheritance. **Sociology and Social Research**, 67 (2): 204-217.
- Pichler, F. and Wallace, C. (2009) Social capital and social class in Europe: the role of social networks in social stratification. **European Sociological Review**, 25 (3): 319-332.
- Portes, A. (1998) Social capital: its origins and applications in modern sociology. **Annual Review of Sociology**, 24: 1-24.
- Prandy, K. (1986) "Similarities of life-style and the occupations of women." In Crompton, R. and Mann, M. (eds.) **Gender and stratification**. Cambridge: Polity Press in association with Oxford: Basil Blackwell. pp. 137-153.
- Prandy, K. and Lambert, P. (2003) Marriage, social distance and the social space: an alternative derivation and validation of the Cambridge Scale. **Sociology**, 37 (3): 397-411.
- Preston, B. (1974) Statistics of inequality. **The Sociological Review**, 22 (1): 103-118.
- Putnam, R.D. (1993) **Making democracy work: civic traditions in modern Italy**.

- Princeton and Chichester: Princeton University Press.
- Putnam, R.D. (1996) Who killed civic America? **Prospect**, March: 66-72.
- Putnam, R.D. (2000) **Bowling alone: the collapse and revival of American community**. New York: Simon and Schuster.
- Ramsøy, N.R. (1966) Assortative mating and the structure of cities. **American Sociological Review**, 31 (6): 773-786.
- Ritter, K.V. and Hargens, L.L. (1975) Occupational position and class identification of married working women. **American Journal of Sociology**, 80 (4): 932-948.
- Rosenfeld, R. (1978) Women's intergenerational occupational mobility. **American Sociological Review**, 43 (1): 36-46.
- Rothon, C. (2008) Women, men and social class revisited: an assessment of the utility of a 'combined' schema in the context of minority ethnic educational achievement in Britain. **Sociology**, 42 (4): 691-708.
- Savage, M., Warde, A. and Devine, F. (2005) Capitals, assets, and resources: some critical issues. **The British Journal of Sociology**, 56 (1): 31-46.
- Schwendinger, J. and Schwendinger, H. (1971) Sociology's founding fathers: sexist to a man. **Journal of Marriage and Family**, 33 (4): 783-799.
- Shils, E. (1968) "Deference." In Jackson, J.A. (ed.) **Social stratification**. Cambridge: Cambridge University Press.
- Smith, S.S. (2005) 'Don't put my name on it': social capital activation and job-finding assistance among the Black urban poor. **American Journal of Sociology**, 111 (1): 1-57.
- Sørensen, A. (1994) Women, family and class. **Annual Review of Sociology**, 20: 27-47.
- Spellerberg, A. (1997) "Towards a framework for the measurement of social capital." In Robinson, D. (ed.) **Social capital and policy development**. Wellington: Institute of Policy Studies. pp.42-52.
- Stanworth, M. (1984) Women and class analysis: a reply to John Goldthorpe. **Sociology**, 18 (2): 159-170.
- Stevens, G. and Boyd, M. (1980) The importance of mother: labour force participation and intergenerational mobility of women. **Social Forces**, 59 (1): 186-199.

- Stevens, J.P. (2002) **Applied multivariate statistics for the social sciences**. 4th ed. New Jersey: Lawrence Erlbaum Associates, Inc..
- Stewart, A., Prandy, K. and Blackburn, R.M. (1973) Measuring the class structure. **Nature** 245 (5426): 415-417.
- Stewart, A., Prandy, K. and Blackburn, R.M. (1980) **Social stratification and occupations**. London: Macmillan.
- Taylor, M.F., Brice, J., Buck, N. and Prentice-Lane, E. (eds.) (2009) **British Household Panel Survey user manual Volume A: introduction, technical report and appendices**. Colchester: University of Essex.
- Thornes, B. and Jean, C. (1979) **Who divorces?** London and Boston: Routledge and Kegan Paul.
- Tilly, C. (1998) **Durable inequality**. Berkeley and Los Angeles: University of California Press.
- Toomey, D. (1989) Linking class and gender inequality: the family and schooling. **British Journal of Sociology of Education**, 10 (4): 389-402.
- Tzeng, M. (1992) The effects of socioeconomic heterogamy and changes on marital dissolution for first marriages. **Journal of Marriage and Family**, 54 (3): 609-619.
- van Oorschot, W. and Arts, W. (2005) The social capital of European welfare states: the crowding out hypothesis revisited. **Journal of European Social Policy**, 15 (5): 5-26.
- Vogler, C. (2005) Cohabiting couples: rethinking money in the household at the beginning of the twenty first century. **The Sociological Review**, 53 (1): 1-29.
- Watson, W.B. and Barth, E.A.T. (1964) Questionable assumptions in the theory of social stratification. **Pacific Sociological Review**, 7 (1): 10-16.
- Weber, M. (1961) **From Max Weber: essays in Sociology**. London: Routledge and Kegan Paul.
- Westergaard, J. and Resler, H. (1975) **Class in a capitalist society**. London: Heinemann.
- Wesolowski, W. and Slomczyński, K. (1968) "Social stratification in the Polish cities." In Jackson, J.A. (ed.) **Social stratification**. Cambridge: Cambridge University Press.
- West, J. (1978) "Women, sex and class." In Kuhn, A. and Wolpe, A. (eds.) **Feminism and**

Materialism: Women and Modes of Production. London: Routledge and Kagan Paul.

Williams, R.M., Jr. (1951) **American society.** New York: Knopf.

Winship, C. and Radbill, L. (1994) Sampling weights and regression analysis. **Sociological Methods and Research**, 23 (2): 230-257.

Wright, E.O. (1989) Women in the class structure. **Politics Society**, 17 (1): 35-66.

Wright, E.O. (1997) **Class counts: comparative studies in class analysis.** Cambridge: Cambridge University Press, and Paris: Maison des Sciences de l'Homme.

Wright, E.O. ([2000] 2004) **Class counts: student edition.** Cambridge: Cambridge University Press, and Paris: Maison des Sciences de l'Homme.