



A Symbiosis:

Social structure and personal values in the Netherlands

Oscar Smallenbroek

Thesis submitted for assessment with a view to
obtaining the degree of Doctor of Political and Social Sciences
of the European University Institute

Florence, 22 September 2020

European University Institute

Department of Political and Social Sciences

A Symbiosis

Social structure and personal values in the Netherlands

Oscar Smallenbroek

Thesis submitted for assessment with a view to
obtaining the degree of Doctor of Political and Social Sciences
of the European University Institute

Examining Board

Prof. Dr. Hans-Peter Blossfeld, European University Institute

Prof. Dr. Juho Härkönen, European University Institute

Prof. Dr. Aart C. Liefbroer, Vrije Universiteit Amsterdam

Prof. Dr. Daniela Grunow, Goethe Universität Frankfurt am Main

© Oscar Smallenbroek, 2020 |

No part of this thesis may be copied, reproduced or transmitted without prior permission of the author

Researcher declaration to accompany the submission of written work
Department of Political and Social Sciences - Doctoral Programme

I, Oscar Smallenbroek certify that I am the author of the work “A Symbiosis: social structure and personal values in the Netherlands” I have presented for examination for the Ph.D. at the European University Institute. I also certify that this is solely my own original work, other than where I have clearly indicated, in this declaration and in the thesis, that it is the work of others.

I warrant that I have obtained all the permissions required for using any material from other copyrighted publications.

I certify that this work complies with the Code of Ethics in Academic Research issued by the European University Institute (IUE 332/2/10 (CA 297)).

The copyright of this work rests with its author. Quotation from it is permitted, provided that full acknowledgement is made. This work may not be reproduced without my prior written consent. This authorisation does not, to the best of my knowledge, infringe the rights of any third party.

I declare that this work consists of 68,516 words.

Signature and date:

A handwritten signature in black ink, appearing to read 'Oscar Smallenbroek', written in a cursive style.

1 June 2020

To Josip Peić

(1985-2015)

Contents

Chapter 1	Introduction.....	17
1.1	Social Structure and Personality: Why study values?.....	20
1.2	The Netherlands	21
1.3	Outline of the Dissertation.....	23
Chapter 2	Theory on Personal Values	27
2.1	A Short History of Values Research.....	27
2.1.1	Value Research in the Late 20th Century	30
2.2	The Theory of Basic Human Values.....	31
2.2.1	The Content of Needs	32
2.2.2	The Content of Values.....	34
2.2.3	The Structure of Values: Their interrelations.....	35
2.3	How are Values implicated in behavior?.....	38
2.3.1	Dual-process Models.....	38
2.3.2	Values, Cognition, and Emotion.....	39
2.3.3	Mechanisms of Individual-level Value Change.....	41
2.4	Conclusion	42
Chapter 3	Associations with Personal Values: Gender, cohort, household and social class.....	45
3.1	Value Change Over Cohorts and the Life-Course.....	46
3.1.1	Occupations and Values.....	47
3.1.2	Gender and Values.....	49
3.2	The Context of the Netherlands.....	50
3.3	Data and Measures:	55
3.3.1	Variables:.....	56
3.4	Analytical strategy:.....	60

3.5	Results	60
3.5.1	Gender, Cohort and Age Differences	61
3.5.2	The Household and Values.....	64
3.5.3	Occupations and Personal Values.....	67
3.6	Discussion	70
3.7	Conclusion	72
Chapter 4	Exploration and Validation of the Rokeach Value Survey in the Longitudinal Internet Studies for Social sciences.....	73
4.1	Values and Value Measures.....	73
4.2	Research Design.....	75
4.3	Methods.....	76
4.3.1	Multidimensional Scaling	76
4.3.2	Multi-group Confirmatory Factor Analysis	77
4.4	Data.....	78
4.4.1	Longitudinal Internet Studies for Social sciences	78
4.4.2	European Social Survey.....	79
4.4.3	International Social Survey Programme	79
4.4.4	World Value Survey.....	79
4.4.5	European Value Survey.....	79
4.5	Measurement Instruments.....	80
4.5.1	The Rokeach Value Survey	80
4.5.2	The Portrait Value Questionnaire.....	80
4.5.3	Parenting Values.....	82
4.5.4	Job Values	83
4.6	Results.....	83

4.6.1	Seven Factors Solution.....	83
4.6.2	Multidimensional Scaling of the RVS in the LISS data 2008.....	84
4.7	MDS of PVQ data ESS 2008 and WVS 2012.....	90
4.8	Selection of Items from the RVS.....	92
4.9	Confirmatory Factor Analysis.....	92
4.10	RVS Factors and the Portrait Values Questionnaire.....	93
4.11	The RVS Factors and Parenting Values.....	95
4.12	The RVS Factors and Job Values.....	98
4.13	Conclusions.....	99
Chapter 5	Stratification and Values: Two sides of the same coin.....	101
5.1	Job and Personal Values: Concepts and measurement.....	103
5.2	Literature Review Values and Occupations.....	105
5.2.1	Value Change over the Life Course.....	107
5.2.2	Gender Differences in Values.....	108
5.3	The Dutch Context.....	110
5.4	Data and methods.....	112
5.4.1	Measurements.....	113
5.5	Research design.....	114
5.6	Results.....	116
5.6.1	Fields of Study and Personal Values.....	120
5.6.2	Personal Value Differences Between Current Occupation.....	122
5.6.3	Intra-individual Value Change and First Job.....	126
5.6.4	Intra-Individual Value Change and Mean Item Response.....	129
5.7	Discussion.....	132
5.8	Conclusion.....	135

Chapter 6 Interdependence in the Age of Individualism: The effect of personal values on first marriage
137

6.1	Staying True to Theory in Measurement.....	138
6.2	Distinguishing Components of Self-development from Individualism.....	139
6.3	The Current Study.....	143
6.4	Hypothesis	145
6.5	Data and Methods	145
6.5.1	Measurements	148
6.5.2	Analytical strategy.....	149
6.6	Results	152
6.6.1	Regression Results	155
6.7	Discussion	157
6.8	Conclusion	160

Chapter 7 Who Does What and Why: The household division of labor and gender encoded motivation
163

7.1	Theoretical Perspectives on the Division of Household Labor.....	164
7.2	Gendered Identities and Self-expression	167
7.3	Personal values and Gender Expression	168
7.4	Data and Methods	169
7.5	Measures.....	170
7.5.1	Dependent Variables	170
7.5.2	Independent Variables.....	170
7.6	Analytical Strategy and Sample Selection	172
7.7	Results	173
7.8	Discussion and Conclusion	178

Chapter 8	Conclusion	183
8.1	Why and How are Values Shaped by Social Structure	185
8.2	How Values Guide Behavior.....	186
8.3	Measurement Issues	188
8.4	Limitations and Future Directions	189
8.5	Final Remarks.....	191
References	193
Appendix A	Assessment of Self-reported Occupational Group in LISS.....	213
Appendix B	Descriptive Statistics, Fixed Effects and Population Averaged Logistic Models ..	218
Appendix C	Discrete Event History Models for Any Marriage and Cohabitation by Gender	225
Appendix D	Descriptive Statistics and Between effects Regression Table of Values on the Division of Household Labor	227

List of Tables

Table 2-1: Values, Definitions, Needs and Example Items	37
Table 3-1 Cohorts in the ESS Data	56
Table 3-2 Model fit of Multigroup Confirmatory Factor Analysis of Value Orientations	57
Table 3-3 Value Orientations and their items and (values) from the Portrait Value Questionnaire 21 (Schwartz 2003:311:314).....	58
Table 3-4 Household Types and their Percentage.....	59
Table 3-5: Distribution of Oesch Classes in the ESS data.....	59
Table 3-6: Age, Social Class and Household Distribution by Cohort	61
Table 4-1 Value Items of the PVQ21 in the ESS taken from (Schwartz 2003:311:314)	81
Table 4-2 Value Items of the PVQ10 in the WVS (Marchand 2013)	82
Table 4-3 The 7 Factor Solution of the RVS items by Schwartz 1992	84
Table 4-4 Factors from the Rokeach Value Survey.....	93
Table 4-5 Correlations of the PVQ10 items for RVS Factors	94
Table 4-6 Correlations between ipsatized RVS factors and PVQ10 items.....	95
Table 4-7 Correlations between Job Values and the RVS Factors (ISSP)	98
Table 5-1: Correspondence table between Value measures (examples) and the cross-sectional correlation between personal and job values (see Chapter 4)	105
Table 5-2 Mean Gender difference between all respondents in values for respondents 18-30.....	117
Table 5-3 Mean Gender difference in values for respondents 31-55.....	117
Table 5-4: Field of Study by Gender	118
Table 5-5: Current Occupation and Gender, respondents between 32-55	119
Table 5-6: Tabulation of First Occupation by Gender	120
Table 5-7 Between Effects of occupations on values for respondents aged 31-55.....	124
Table 7-1: Gender differences in the mean of reported division of labor, personal values and norms .	173
Table A-1: Job Task Factors, Questions and Question wording	214
Table A-2: Self-identified occupation by mean importance of job tasks	215
Table A-3 Self-Identified Occupation by Oesch Class.....	216
Table B-1 Fixed Effects regressions of Values on Age (Men 31-55)	218
Table B-2 Fixed Effects regressions of Values on Age (Men 31-55)	219

Table B-3 Fixed Effects regressions of Values on Age (Women 31-55)	220
Table B-4 Fixed Effects regressions of Values on Age (women 31-55)	221
Table B-5: Effects of values on log odds of graduating from a field of study, population averaged logistic regression	222
Table B-6 Descriptive Statistics Field of Study Sample.....	223
Table B-7: Descriptive Statistics Current Occupation Sample.....	223
Table B-8 Descriptive Statistics Intra-Individual Value Change.....	224
Table B-9: Number of Observations contributed by Respondents, First job Sample.....	224
Table C-1: Descriptive Statistics of Marriage Event Sample and Cohabitation Event Sample.....	225
Table C-2 Discrete Event History Model for Any Marriage and Cohabitation by Gender	226
Table D-1: Descriptive Statistics	227
Table D-2 Between Effects Model of Respondent's and Partner's Personal Values, Norms and controls on Division of Male and Female Typed Household Labor.....	228

List of Figures

Figure 2-1 The Circumplex of Basic Human Values (Schwartz 2012:669).....	36
Figure 3-1 Mean Higher Order Values of Female (above) and Male (below) Respondents by Cohort over Age	63
Figure 3-2 Conservation Values of Female Respondents by Cohort and Household over Age	64
Figure 3-3 Conservation Values of Male Respondents by Age Category, Cohort and Household	65
Figure 3-4 Openness to Change of Females (Above) and Males (Below) by Cohort and Household	66
Figure 3-5 Values of Females by Cohort and High (top) and Low (bottom) Skilled Oesch Class	68
Figure 3-6 Values of Males by Cohort and High (top) and Low (bottom) Skilled Oesch Class	69
Figure 4-1 Shepard Diagram of the RVS MDS.....	85
Figure 4-2 Coordinate Plot of the RVS with alternative coordinates from a Jackknife Procedure	86
Figure 4-3 Coordinate Plot of the RVS MDS with 95% Confidence Intervals.....	87
Figure 4-4 MDS Coordinate plot of the RVS items in the 2008 LISS data	89
Figure 4-5 Coordinate Plot of PVQ21 MDS (ESS).....	91
Figure 4-6 Coordinate Plot of the PVQ10 (WVS).....	91

Figure 4-7 Associations in odds ratios between Personal and Parenting Values, WVS	97
Figure 4-8 Associations in odds ratios between Personal and Parenting Values, EVS.....	98
Figure 5-1 The effect of Values on the odds of graduation from a field of study, men	121
Figure 5-2 The effect of Values on the odds of graduation from a field of study, women.....	122
Figure 5-3 Effects of Age and Age by First Job Interaction on Value Orientations, Men (31-55).....	127
Figure 5-4 Effects of Age and Age by First Job Interaction on Value Orientations, Women (31-55)	128
Figure 5-5 Effects of Age and Age by First Job Interaction, controlling for mean ratings, on Value Orientations, Men (31-55)	130
Figure 5-6 Effects of Age and Age by First Job Interaction, controlling for mean ratings, on Value Orientations, Women (31-55)	131
Figure 6-1 Survival Functions for Any Marriage and Cohabitation	153
Figure 6-2: Hazard Rate of Any Marriage by Importance of Value and Gender	154
Figure 6-3 Hazard Rate of Cohabitation by Importance of Value and Gender.....	155
Figure 7-1: Linear Association between Values, Norms and Division of “Female” Typed Tasks	175
Figure 7-2: Linear Association between Values, Norms and Division of “Male” Typed Tasks.....	175
Figure 7-3 The Effects of Norms on the division of "Male" and "Female" Typed Household Tasks ..	176

Acknowledgements

Pursuing a PhD is an intellectually and personally challenging process. There are many people within the EUI, in my broader social circles and family who have lend invaluable support throughout the years. I want to give thanks to my parents, Jantinus and Annelies, to my siblings, Jasper, Tobias and Astrid, to my friends in the Netherlands, Martyn, Roberto, Rachael, Melis and Cana, and the entire 2015 SPS cohort and its honorary members. You helped me through one of the most difficult times of my life when our colleague and friend, Josip Peić, passed away. A special thanks goes to Giuliana Guiliani who housed me in the immediate aftermath and became an indefatigable source of support. I want to thank Paula Zuluaga for her friendship, company, and support throughout the PhD. I want to thank Ioan Balaban for his friendship, support and introducing me to intergalactic.fm and cooking Italian food.

The EUI provides opportunities to discuss and share our work with academics at all stages of their career. I want to thank Giuliana, Katy, Diana, Marco, Ilze and Carlo for their comments during our Auto-Aiuto Working Group and the many individual meetings. I want to thank Florian Hertel for his enthusiastic, constructive, and in-depth discussions on social class theory and my PhD project. I want to thank Juho Härkönen for his comments on several draft chapters. I want to thank Carlo Barone for his comments and advice.

I want to thank the examining board for their criticism, comments and suggestions which have improved the quality of the final thesis. I want to thank Hans-Peter Blossfeld for providing the opportunity to pursue a PhD at the EUI and his support and trust throughout the years.

Abstract

I examine the role of personal values in the reproduction of social structures in the Netherlands. Previous research failed to distinguish values from culture, neglected self-transcendence and self-enhancement values and the life-course. I use the life-course perspective to investigate how gender and social class interact with personal values to produce behavior and inequalities. Chapter 2 provides the psychological theory on values and their role in behavior. Chapter 3 describes the association between personal values and age, cohorts, occupations, and households using the European Social Survey. In Chapter 4, I construct a value measure using the Longitudinal Internet study for Social Sciences and the theory of basic human values. In Chapters 5 to 7, I use these value measures and the dual process theory of cognition, status characteristics theory and doing gender to frame the analysis. I show that theoretically informed value measures substantively improve our understanding of value's relationship to social structures and behaviors. Using longitudinal data, gender is found to effect self-transcendence and self-enhancement values and their in application in choices of fields of study, occupational socialization, the probability of marriage and the production of inequalities in household division of labor.

Chapter 1 Introduction

the advent of a world in which human beings shall enjoy the freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people.

- *The Universal Declaration of Human Rights*

Since 1948, the declaration of human rights defines goals for human society. These goals are based on shared values and a common understanding of the human condition. Most people agree with the statement above; the desirability of a world which provides freedom of belief and speech and provides economic and social security. The quote demonstrates some defining characteristics of values. Values are abstract ideas such as freedom of speech or security which we apply in many contexts, they are trans-situational. The content of these ideals and their underlying motivations can be traced to human needs. Human beings require physiological, psychological, and social resources to function. Ranking values in accordance to individual's needs creates a value system which guides individual goal setting, decision making, behavior, and attitudes. These properties led to considerable interest from sociologists in the early 20th century. Values provide a means to study how social structures shape individual's goals and behaviors and how these goals and behaviors recreate social structures. However, values research was fragmented by a lack of theory on values and mechanisms through which values effect behavior. After the 1960s, attention shifted to the life-course and values were left on the wayside. This dissertation integrates a modern approach to personal values with the life-course perspective.

Values research in the early 20th century lacked a coherent theory of values and was therefore often forced to make assumptions on the content and dimensions of values. Typically, sociological research focused on one value dimension: conservation versus openness to change values. These values roughly correspond to Inglehart's "survival - self-expression" dimension and Kohn's "authoritarianism - self-direction" dimension. This dimension is related to material conditions and position within a social hierarchy. However, the theory of basic human values (Schwartz 1992; Schwartz and Bilsky 1987) shows a second dimension exists: self-transcendence to self-enhancement values. Most sociological works have ignored this value dimension,

unknowingly combined these values with others, or reduced both dimensions into a single dimension. This practice is problematic as I show that self-transcendence and self-enhancement values play a role in social interaction, particularly how gender shapes value expression and behavior.

Earlier sociological work on values was also limited by its conceptual framework on the production of social inequalities. For example, Kohn and Slomczynski (1990) show that the complexity of an occupation affects how important the practitioner believes self-direction to be over authority. In this work, there is no consideration of how a specific point in time is embedded in job or family careers. In a second edition of "Social structure and self-direction", Kohn and Slomczynski (1990:250) acknowledge that the effects of occupational complexity could depend on different processes such as the stage of the job career or developmental age. Other works have examined value change across cohorts. Inglehart (1977) argues that the economic conditions cohorts experience in early life shape self-expressive and survival values. The Second Demographic Transition narrative (Lesthaeghe 2010; Van de Kaa 1987) built on these findings to argue that demographic change is driven by cohort changes in values. These works assume values are static beyond adolescence and assume the meaning and expression of values do not change over time.

Instead of a static "structure affects behavior" framework, I use the life course framework. It emphasizes that an individual's past, present, and future affect action because it is situated within a historical, social, and immediate context where individual lives are linked to others through familial and community bonds (Elder, Johnson, and Crosnoe 2003; Mayer 2009). The historical time, opportunity structures, legal institutions, and social institutions create constraints, individuals have goals, and these are reconciled in a process that has a start, a trajectory, and an end. These are conceptualized as careers: a sequence of states and transitions between states where the timing of transitions and the time spent within states are given theoretical and methodological consideration. Each career within an individual life interacts and often these careers will also interact with the careers of close others (linked lives).

Life-course research can also benefit from including personal values. The theory and tools of the life-course framework are often difficult to implement or measure empirically (Abbott 1992). In particular, the role of agency is difficult to distinguish from structural pressures. Data only shows us what has happened in a single (or multiple) time point, not what goals

and constraints were optimized to create it. This often leads to the use of proxy variables such as education to assume the goals and desires of individuals. Indeed, Mayer (2009:426) notes that "the interaction of psychological dispositions and processes and socially constructed life courses still awaits a systematic investigation". Personal values present a method to directly measure the goals of individuals. However, previous works in sociology have been unable to present a convincing theoretical framework that demonstrates how values affect behavior.

This dissertation traces the role of values in behavior from cognition to culture using dual-process models of cognition, status characteristic and "doing gender" theories (Ridgeway 2009; Vaisey 2009; West and Zimmerman 1987). Values are not only shaped passively by the economic context or the repetition of behavior as Inglehart (1977) and Kohn (1989) claim but are also part of identity formation and enactment. Therefore, we must understand how individuals interpret and relate to others within specific contexts. This is where status characteristics and "doing gender" become invaluable theoretical lenses. These theories describe how cultural beliefs shape the self, interaction, and context. I argue that these processes extend to values and value expression. I focus my analysis on gender as it is a primary frame through which we experience, identify, and interact. How values are shaped and used can be understood at several levels of analysis. Chapter 2 will address this theoretically while Chapters 5-7 implement it empirically. In the following sections I will further elaborate on the motivation to study values, the selection of a Dutch longitudinal dataset and outline the contents of the chapters.

1.1 Social Structure and Personality: Why study values?

"Structures, in short, empower agents differentially, which also implies that they embody the desires, intentions, and knowledge of agents differentially as well."

(Sewell 1992:21)

"Values define the limits of permissible cost of an expressional gratification or an instrumental achievement by invoking the consequences of such action for other parts of the system and for the system as a whole"

(Kluckhohn 1951:394)

Previous values research was based on the Social Structure and Personality approach which distinguishes structure – the material conditions which constrain and enable action – and culture, which are beliefs and values. House defined social structure as “a *persisting* and bounded *pattern* of social relationships (or pattern of behavioral intention) among the units (persons or positions) in a social system” and culture as “a set of cognitive and evaluative beliefs - beliefs about what is or what ought to be” while personality is defined as any stable and persisting psychological attribute (House 1981:542, emphasis in original). Research using these concepts is guided by three principles:

1. Components principles: what components of a social system – i.e. which social structures – are most relevant to understand the phenomena under study.
2. Proximity principle: Where do social structures shape experience. This requires the researcher to identify the meso level contexts, from dyadic interaction to formal organizations where the components have an impact.
3. Psychological principle: How do these experiences affect individuals. This requires researchers to identify the psychological mechanisms through which structures shape experience within the proximate environment.

These principles draw attention to the mechanisms through which a social system affects its actors. However, the SSP definition of culture, structure, and personality make it difficult to distinguish them. A solution is provided by Sewell (1992) who argued social structures have a

dual nature. He argues social structures are produced when schema and resources mutually sustain each other.

Schema refers to generalized ways in which we organize knowledge and process stimuli (Lizardo et al. 2016; Vaisey 2009). Schemas exist because our attention, memory, and processing power are limited. To get around these limitations the human brain reduces information using categorization and reduces processing using heuristics and stereotypes. These properties of human cognition are found in the structure of the brain and can be conceptualized as cognitive schema – as an interconnected set of objects which aid in the processing of stimuli and the retrieval of information from memory. These can become active in cognition through conscious deliberation or unconscious application. When cognitive schemas are intersubjective, we use them as templates for interaction which facilitates coordination and communication (Ridgeway 2009). However, the categories, stereotypes, and heuristics also become self-fulfilling prophecies. In this way, durable patterns of behavior form when cognitive schemas are shared, and resources support their enactment

There is an important distinction in values research between culture and schema which Sewell ignores. The schema Sewell refers to “consist of intersubjectively available procedures” (Sewell 1992:9) while values, as properties of individuals, are not intersubjective; only the symbolic representations of values are intersubjective. In other words, we must separate values as psychological and internal properties of individuals from values as represented in cultural schemas. The schema Sewell refers to are our culture, identities, and other shared ideas with which we express our values. Together these shape behaviors: cultural schema provide the form of behavior while values set the “limits of permissible costs” of behavior (Kluckhohn 1951:349).

Values provide a window into the interaction between social structures, culture, and psychological processes. Values link the internal experience and functioning of individuals to social interaction and social structures (Hitlin 2003). This is important, as Callero (2014:273) notes “most theory and research ... explores the causes and consequences of inequality without explicitly theorizing the self or identity”. Yet one reason we study inequality is precisely their effects on the self and identity, as inequality often degrades human dignity.

1.2 The Netherlands

Two motives lie behind the use of data from the Netherlands. The first is practical, there are simply few longitudinal data sets which have adequate measurement instruments of personal

values. In all, I found three datasets that could be used. In 1971 the Longitudinal Study of Generations started in California, USA (Bengtson, Vern L. 2008). This dataset is interesting because it includes multiple generations of the same household over time and includes the Rokeach Value Survey. It is therefore perfect for disentangling cohort, family, and age effects. However, the sampling procedure was not representative of the population. Rather participants were recruited from the California Health Maintenance Organization in Los Angeles and further restricted to three-generation families. The second dataset is a nationally representative sample, the New Zealand Values and Attitudes Study, initiated in 2009. It includes a version of the portrait values questionnaire. The third data set is the Longitudinal Internet studies for the Social Sciences (LISS). It includes the Rokeach Value Survey and other modules on a wide range of social and economic issues.

From this small number of datasets, I chose to study the Netherlands because I understand the culture. The importance of this fact will become clear throughout the dissertation. As discussed briefly, personal values are abstract ideas that are symbolized in culture. Researchers must understand both the theory of values and the culture in which they are studied. Given that I am mostly ignorant of contemporary New Zealand and Los Angeles in the 1970s, I choose to study the Netherlands, my native country. Additionally, I chose to forgo a cross-national comparison because there is relatively little research on the correlates of values as they are envisioned in this dissertation. Cross-national comparisons would most likely produce ambiguous results and require input from country-specific experts. One aim of this dissertation is to demonstrate the utility of personal values in sociological study. I choose to do one case well rather than to make broad claims with limited knowledge of the countries studied.

The Netherlands is a country where we may expect personal values to have a greater impact compared to other countries. It is one of the most developed countries in terms of wealth and the quality of life. It ranked 10th in the 2019 Human Development Index and 6th in the Gender Equality Index in Europe, 2019. The high quality of life allows individuals to express themselves because laws, norms, and economic factors play a smaller role in constraining behavior, on average. This is not to say that there are no norms, economic constraints, or ideological factors that constrain behavior but in comparison to many other places it is relatively open. A description of the institutional, social, and economic changes in the

Netherlands can be found in Chapter 3. Some chapters will include additional information on relevant institutions and culture.

1.3 Outline of the Dissertation

The dissertation consists of eight chapters. Chapter 2 introduces value theory while Chapter 3 provides a descriptive overview of personal values in the Netherlands. Chapter 4 validates the measurement of values found in the LISS data. Chapters 5, 6, and 7 each take an outcome or behavior and examine what role values play in the reproduction of social structures. In Chapter 5, I examine occupational and educational choices, focusing on horizontally differentiated theories of social class and gender. In Chapter 6 I examine the effects of values on the probability of first marriage. In Chapter 7, I examine the role of values in the division of household labor. Finally, Chapter 8 provides a broad overview, conclusion, and directions for future research.

Chapter 2 outlines a short history of the study of values in sociology and psychology and the current state of the art: the theory of basic human values (TBHV). The theory describes the relationship between needs, goals, and values, and the relationship between values. Dual-process models of cognition describe the functioning of values in cognition and behavior. These theories draw attention to the abstract nature of values, their symbolic representations in culture and the need to understand their relationship to behavior in specific contexts.

Chapter 3 provides a descriptive overview of the Netherlands and the association between values, cohort, age, households, and occupation using the European Social Survey (ESS). It also includes a description of the social, economic, and cultural changes in the Netherlands over the 20th century. The predicted means of cohorts, age, households, and occupational groups are plotted. This provides evidence of variation in personal values across these categories.

Chapter 4 explores the utility of the Rokeach Value Survey in the Longitudinal Internet study for the Social Sciences (LISS) which the subsequent chapters utilize. The chapter introduces the Rokeach Value Survey (RVS) and the Portrait Values Questionnaire. Using multidimensional scaling and multi-group confirmatory factor analysis, I examine whether coherent value dimensions can be extracted from the Rokeach Value Survey which represent those in the TBHV. As the RVS was developed before the TBHV, there are some imperfections. Nevertheless, I find two higher-order values: conservation and openness to change, and two

value types: achievement and benevolence. Lastly, their construct validity is tested by correlating them with other value measures in the LISS data.

Chapter 5 builds on the work of Melvin Kohn and colleagues (Kohn 1959, 1989; Kohn and Schooler 1983; Kohn and Slomczynski 1990), and Mortimer, Johnson, and colleagues (Johnson 2002; Mortimer, Lorence, and Kumka 1986). It examines how personal values are associated with educational and occupational trajectories. Although these works do not contradict each other they do complicate comparison by measuring different value dimensions. The theory of basic human values is the bridge that joins these two literatures and, in the process, shows that the job values literature combines self-enhancement and conservation dimensions of values while Melvin Kohn's work can be extended by incorporating horizontal divisions in social class. Additionally, I extend these literatures by incorporating a gender perspective using status characteristics theory.

Chapter 6 applies the theory of human values to the second demographic transition literature (SDT). The second demographic transition (SDT) narrative identifies two trade-offs in demographic behavior. The first is between autonomy and social conformity. The second is between individualism and interdependence. However, the SDT narrative uses openness to change and conservation values to measure both trade-offs. I argue that achievement and benevolence values capture the trade-off between individualism and interdependence. Using discrete event history analysis and longitudinal data from the Netherlands, I show that benevolence values are positively and openness to change values are negatively associated with the hazard rate of marriage. These results support the SDT narrative in that personal preferences for autonomy and self-expression are associated with a lower hazard rate of marriage. However, the results also support adjusting the theory and predictions made by the SDT. The positive effect of benevolence values on marriage indicates that some growth values increase the probability of marriage, contrary to what the SDT claims.

Chapter 7 takes culture and social structure into the household and examines the division of household labor within couples. Using the “doing gender” and status characteristics theories I argue that gender is internalized within the value system. Additionally, gender frames behavior so that men and women express similar values in different ways. I show that values and norms have independent effects on the division of household labor. Women who are more conservation-oriented do more and women who value achievement do less female typed

household labor while men engage with female typed labor based on their gender norms. This implies that gender inequalities in household labor are produced through an internalized process that may be resistant to normative and institutional pressures.

Chapter 8 concludes the dissertation. Using the empirical chapters I argue that values research in sociology must be based on a theory of values, grounded in culture and studied using the life-course framework. I then highlight the main empirical contributions and reflect on the generalizations that can be extracted. The previously neglected self-transcendence and self-enhancement values are tied to interpersonal interaction and decision making, particularly visible in differentiating the choices of men and women. Conservation values are associated with social stratification, confirming previous research. Openness to change values are more difficult to relate directly to social structure, the only robust association is with self-employment. I also consider the limitations of the empirical chapters and directions for further research.

Chapter 2 Theory on Personal Values

Conceptual ambiguity and theoretical disagreement haunt value research. Consequently, preferences, norms and attitudes are often labeled as values. In a review Rohan (2000:255) notes: “the word values is open to abuse and overuse”. This chapter defines what values are and what they are not, how they differ from attitudes, norms and preferences, where values come from, how they relate to behavior, emotion and cognition and how abstract values become observable.

2.1 A Short History of Values Research

Talcott Parsons and colleagues founded the modern sociological study of values. They made significant theoretical contributions and revealed many obstacles. First among their achievements is incorporating the word value into the sociological lexicon. Philosophers and economists often discuss value as a property of objects. Value research was defined as the study of ideas. Kluckhohn (1951:395), defined values as: “a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable that influences the selection from available modes, means and ends of action”. Kluckhohn explains this definition word by word, which I paraphrase below.

We cannot observe values as they are ideas (conception). Kluckhohn compares values to culture both are intersubjective, either embodied or symbolized. We can use these ideas explicitly. The value system provides a coherent framework to justify choices. However, values also have a strong affective component. We are disgusted by moral transgressions of others and ashamed of our own. We rejoice in the administration of justice and are elated by beauty.

Values are set apart from preferences, attitudes, and norms by the combination of cognitive, affective, and selective characteristics. Preferences are personal likes and dislikes or affective orientations. However, preference can themselves be judged in their desirability. Kluckhohn gives the example of a guilty pleasure. It is a preference which is deemed undesirable by the person. Values are at a higher level of abstraction and evaluation. Preferences are personal desires while values are intersubjective standards of desirable qualities.

Norms and values provide cohesion and social control. However, they do so through different mechanisms. Kluckhohn argues that an individual’s value system is an evaluative framework which considers the individual’s and society’s needs: “Values define the limits of permissible

cost of impulse satisfaction in accord with the whole array of hierarchical enduring goals of the personality, the requirements of the interests of others and of the group as a whole in social living” (Kluckhohn 1951:399). Values affect behavior because individuals feel validated when acting in line with their values and dejected or anxious when going against their values (Maio 2010; Smallenbroek, Zelenski, and Whelan 2017). Norms, on the other hand, regulate behavior through rewards and sanctions in social interaction.

The breakthrough of defining values was short lived as behaviorism gained ground. With its emphasis on observable stimuli and behavior, non-observable properties of individuals were not taken seriously. The proposal that unobservable ideas guided action was therefore untenable. Kluckhohn tried to avoid behaviorist critiques by noting that values select and are not criteria of choice. Ultimately, behaviorist critiques were not the main problem, paradigms come and go, but values stay unobservable ideas. This presents two methodological difficulties. First, values are difficult to distinguish from other influences on behavior. Second, it is difficult to distinguish which ideas are values, which ideas are symbolic representations of values, and which behaviors are symbolic implementations of values.

Parsons was unable to identify the content and symbolic representations of values and became a “cultural determinist” (Spates 1983:33). This exposed Parsons and his collaborators to criticisms which their work did not survive. Spates (1983) summarizes these criticisms as the problems of empirical support, deductive imposition and abstraction. First, Parsons assumed social order to reflect values and having deduced several opposing values (called choice variables), he found evidence for them in the ordering of society. Since these values were, by definition, organizing forces there was little attempt to exclude other factors. Thus, there was little substantive empirical support for the existence of these choice variables. Furthermore, original data collection and systematic empirical studies using Parsons general theory of action were few and far between. As a result, the content of values was unknown and presented a major difficulty. A second caveat to the study of values was that cognitive, and social psychology had yet to present viable theories which could integrate values. Parsons claimed that values control norms and norms control behavior. Partly because of these shortcomings, Parsons work is rarely built upon. However, some of his collaborators and contemporaries continued to develop the field of values research.

Hutcheon (1972) attempted to expound a theory of values based on behaviorist principles. The theory proposes a certain function of values within individuals and mechanisms of interaction between individual and society. Hutcheon argued that the human brain receives stimuli based on some theory of the world – cultural or ideological - which attributes meaning to them. These stimuli have a negative or positive valence and build up or modify associations. Over time these associations become organized and she takes this organization to be values. Value changes occurs through discrepancies between theories and facts or behavior and values to relieve the cognitive dissonance. In short, values emerge out of knowledge and experience build up over time.

Unlike previous works, this model clearly distinguishes culture from individual values and provides an explanation of how culture interacts with values to produce behavior. However, the theory is based on a cognitive behavioral interpretation of the human mind that is missing crucial elements of human motivation (Deci 1975). There is no doubt that our brains are stimuli receiving, sorting and association producing masses. But these are housed in bodies with physiological needs shaped by evolution and embedded in a social and cultural system. These properties require theoretical attention beyond a stimuli-response model.

Other researchers turned their attention to the content of values. Fallding (1965) defined values as self-sufficient ends - they are internal motivations which are satisfied through the experience of action. They are rank ordered which creates the possibility for different people to place a different value on similar objects, means and end states, yet be able to communicate and understand each other. He admits that this definition makes their content difficult to distinguish but nevertheless postulates a framework and content of values.

Fallding (1965) defines egoistic values as those that satisfy something within the self – e.g. stimulation or self-direction. He proposes spiritual values as those where individuals identify with a larger social system or group e.g. service, loyalty, truth. These are subdivided by their breadth or intensity. Broad spiritual values are socially inclusive i.e. humanism while intense spiritual values recognize groups, i.e. nationalism. The content and division of values closely reflects what Schwartz (1992) postulates several decades later.

Empirical research on the content of values came to similar conclusions. Several papers sourced value items from values surveys, open ended questionnaires, literature, and dictionary searches. These were analyzed using factor analysis or multidimensional scaling (Bales and Couch 1969;

Braithwaite and Law 1985; Johnston 1995; Lorr, Suziedelis, and Tonesk 1973). Two dimensions reoccur. One which juxtaposes social restrictions on behavior with self-direction and stimulation. Another which juxtaposes close interpersonal bonds and universalistic group membership with social hierarchy.

Despite these improvements, values did not gain prominence again until Rokeach (1973) published “The Nature of Human Values”. In it, he combined several of the most successful ideas in the values literature. He conceptualized values as ideas of the desirable, as rank ordered, as social or personal in their goals, and as representative of human needs. The ranking of values was an important point as it highlighted that values operate as a system; relative importance affects choices and behavior. Accordingly, respondents rank order items in the Rokeach Value Survey. Additionally, Rokeach argued values are at the center of personality and the self-concept, other attitudes and beliefs were consequences of the value system.

Rokeach settled the field on a definition of values and showed their utility for social scientists. However, their measurement and content were still hotly debated. Indeed, Rokeach was criticized on his methodology in measuring and choosing value items. These seemed arbitrary and exacerbated the sometimes contradictory explanations of the correlates of values (Neumeyer 1974; Schuman 1975; Warner 1976).

2.1.1 Value Research in the Late 20th Century

Prominent sociological work on values did not engage with theoretical and measurement advances. In fact, instruments are tailored to the phenomenon under study. Consequently, they often measure attitudes. For example, both Kohn and Inglehart predominantly examined self-direction/self-expression values and juxtaposed these to social conformity values (Inglehart 1977; Kohn 1989; Kohn and Slomczynski 1990). Both measure these values using attitudinal questions on gender, God, abortion, sexual relationships, and homosexuality. These items are good proxy measures, as attitudes are applications of values. However, as applications, attitudes are culturally and time specific. Similar attitudes on abortion pertain to different levels of conservatism across countries and time. Furthermore, other items in these questionnaires are unrelated to values, such as Inglehart’s happiness or Kohn’s self-deprecation items (Dobewall and Rudnev 2014; Kohn and Slomczynski 1990).

Besides measuring values with attitudes, most research programs did not explore the dimensionality of the values under study. These often forced a theoretically bidimensional

construct into a unidimensional scale. Kohn & Schooler (1969, 1983) are the most thorough on this methodological point. Using factor analysis, they find and label a competence factor among their value items. In subsequent work the authors modified the measurement instrument to include only self-direction and conformity items. Other prominent lines of research do not examine the dimensionality of their value measures or rectify inconsistencies. Among these is the Second Demographic Transition (SDT) narrative, which singles out values as drivers of demographic behavior but empirically examines attitudes (Lesthaeghe 2010). Empirical papers on the SDT label items as conformist or self-expressive based on the researcher's interpretation. Ignoring that some items reflect self-enhancement values, e.g. such as social status (Lesthaeghe and Moors 1995; Surkyn and Lesthaeghe 2004a).

Despite an agreed upon definition of values, disagreement existed on the content of values. Additionally, the measurement of values and their role as cognitive and affective mechanism were also a source of debate. These uncertainties made it difficult to integrate the definitions of values into social research. Researchers turned to attitudinal measures, which are easily interpreted and measured. This was the state of the art in sociology when the 21st century arrived. Rohan (2000) published an article "A Rose by Any Name: The Values Construct" and in 2004 Hitlin and Piliavin title their review "Values: Reviving a Dormant Concept". Indeed, these questions are still being explored, but progress has been made thanks to the Theory of Basic Human Values (Schwartz 1987,1992). It consolidates decades of research and knowledge into one theory.

2.2 The Theory of Basic Human Values

In the late 1980s, Schwartz was able to integrate existing knowledge of the content and structure of values into a coherent theory. Summarizing previous work, Schwartz defined values as "(a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance." (Schwartz and Bilsky 1987:551). He further postulated that all values are cognitive representations of human needs: "biologically based needs of the organism, social interactional requirements for interpersonal coordination, and social institutional demands for group welfare and survival" (Schwartz and Bilsky 1987:551). He was able to back up this claim by reviewing a large body of literature on psychological functioning and health, demonstrating that the derived values were indeed crucial aspects of human functioning (Schwartz 1992;

Schwartz et al. 2012; Schwartz and Bilsky 1987, 1990). His most valuable contribution was to demonstrate a structured relationship between values. For the first time, a clear theory emerged which could predict how any value is related to an outcome and integrate it into the larger psychological literature.

A second important contribution is the identification of the content of values based on human needs. Previous approaches sought to identify values in culture or behavior. The resulting taxonomies mistake symbols or norms for values. Rokeach made a significant step forward in deducing value content from a dictionary search and open-ended questionnaire. The resulting Rokeach Value Survey (RVS) lists 18 terminal and 18 instrumental values (Rokeach 1973). However, a theoretically and statistically coherent set of items failed to materialize from the RVS (Braithwaite and Law 1985; Feather and Peay 1975; Johnston 1995; Rokeach 1973). Building on this work, Schwartz constructed a theoretically, cross-nationally and statistically valid measure of four *higher-order value orientations* (Schwartz 1992, 1994; Schwartz and Bilsky 1987; Schwartz and Boehnke 2004) and ten value types embedded within them. Originally, Schwartz cites a wide variety of literature in support of these values (Schwartz 1992). Later, he categorized these using Maslow's understanding of human needs (Schwartz et al. 2012). I will first review Maslow's Hierarchy of needs and then turn to the four higher order values.

2.2.1 The Content of Needs

According to Maslow, needs are hierarchically arranged to create several stages of self-regulation and motivational orientations. These are often referred to as Maslow's Pyramid of Needs. Each stage emphasizes one type of need over others and shapes how individuals approach and react to their environment (Maslow 1943, 1999). Maslow did not distinguish clearly between needs, values and motivation. However, it is important to keep in mind that values, goals, motivation and needs are distinct concepts in psychology. Needs define what inputs are required to function. Values express these needs through eliciting goals and structuring affect in response to stimuli. In the following discussion, Maslow's ideas are presented and supplemented with recent developments.

According to Maslow, the most basic needs are physiological, these include any substance that the body requires to function. Next are safety needs, the assurance of existential continuity and predictability of the environment. Individuals motivated by these needs are in a state of

constant anxiety – they avoid threats and try to minimize losses. The motivational orientation is reactive to the environment.

In the middle of the pyramid are love and esteem needs. Love needs include close relationships and belonging to a group. Esteem needs are self-evaluations: a sense of agency, competence, respect, prestige, and self-esteem. These needs motivate approach behavior, which is to pursue opportunity and gains but are externally regulated. Only others can make you feel respected. Maslow called these stages deficiency motivated, because the satiation of needs is conditional on others and therefore the individual is dependent on the environment. As a result, that individual is anxious and defensive, lest the environment disappoint or threaten them.

Psychologists no longer use the terms deficiency and being motivation. In modern terminology, extrinsic and intrinsic motivation and internal and external behavioral regulation are distinguished. According to Self-Determination Theory (Deci 1975; Deci and Ryan 2000), externally *regulated* behavior creates suboptimal outcomes, as it undermines intrinsic *motivation* and costs psychological resources. For example, if we are motivated to gain respect or affection from others, it requires forecasting their needs and wants and to control behavior in line with those expectations. This takes a toll on attention and energy and requires the subjugation of agency and emotion. In contrast, intrinsic motivated behavior is rewarded internally and thereby satisfies psychological needs. By freely choosing to pursue a course of action we are rewarded by the feeling of agency and competence. We can use our emotions as affective feedback to build a coherent sense of self and attribute the successes of behavior to ourselves, thereby building up a robust base for our self-perceptions. Overall, we can say that being motivation is akin to intrinsic motivation while deficiency motivation is akin to extrinsic motivation (Kasser 2002).

At the top of Maslow’s pyramid are needs that produce intrinsic motivation. Maslow originally described Self-actualization needs as: “what a man *can* be, he *must* be” or “as the desire to become more and more what one is, to become everything that one is capable of becoming” (Maslow 1943:383). These characterizations are inspired by Aristotle’s concept of eudaimonia, which roughly translates to flourishing. In the late 20th century several efforts refined psychological concepts on eudaimonia (Huta and Waterman 2014). These approaches often include growth, authenticity, meaning and excellence as central definitions of eudaimonia. (Goldman and Kernis 2002; Huta and Waterman 2014; Lenton et al. 2013). Thus, we can

concretely describe self-actualizing as intrinsically motivated and self-regulating individuals who pursue the development of self and exercise of agency.

Maslow replaced self-actualization as the ultimate motivation with another stage (Koltko-Rivera 2006; Maslow 1999). He postulated a motivational orientation called self-transcendence, of pursuing a goal in service to a community or ideal beyond the self. Furthermore, he described a mode of cognition which sounds like a permanent state of mindfulness, being-cognition and being-motivation. That is, a state of perceiving without judgement, without categorizing stimuli into cultural or other predefined categories. For example, aesthetics and knowledge can be pursued purely as an end rather than a means to self-actualization¹.

2.2.2 The Content of Values

Schwartz postulated that four higher order values exist by drawing on Maslow, several other works, and the Rokeach Values Survey. These include self-transcendence, openness to change, self-enhancement and conservation values (see Figure 2-1 and Table 2-1) (Schwartz 1992; Schwartz et al. 2012; Schwartz and Bilsky 1987). He defined these in the following way:

Self-transcendence includes goals which engage and benefit others: family, friends, society, or the environment. It includes two value types: benevolence and universalism. This value orientation serves two needs in Maslow's terminology. Benevolence serves love needs, for example, belonging and intimacy. Universalism serves both love and self-transcendence needs.

Openness to change includes stimulation and self-direction values. These seek specific internal experiences and are based on self-actualization needs. They serve psychological needs of autonomy and arousal and lead individuals to pursue their interests and experience without preconceived judgement.

Self-enhancement values are oriented to strengthening the position of the person vis-à-vis the group, for example, through demonstrating competence in socially valued skills or simply amassing wealth and status. This value is based on esteem-needs.

¹ Koltko-Rivera (2006) notes that each motivational stage defines a central meaning to life. In a similar vein, Gouveia, Milfont, & Guerra (2014) theorized values can be divided to reflect which goals provide a sense of meaning. In this sense, what provides a meaning in life is hierarchically arranged as: survival, social and self-acceptance, self-development, and self-transcendence.

Conservation values include goals which strengthen the position of the individual as a member of the group. These values serve safety needs: groups provide safety and access to resources and reduce uncertainty in the environment.

2.2.3 The Structure of Values: Their interrelations

Needs build on each other to create a hierarchical order. Growth needs recede in importance when basic needs are unmet. When basic needs are satisfied growth needs increase in importance. This is reflected in the two higher order value dimensions. Each dimension pairs basic and growth needs. Additionally, each dimension also pairs a person focused and a social-focused value. This reflects their incompatibilities. Through these incompatibilities a circumplex relationship structure is created between values.

The structure of values arises out of an inevitable conflict in the lives of individuals through their relationship to groups. To live a fulfilling life we require regular interpersonal contact (Baumeister and Leary 1995). To fulfill these needs, we must be a member of several groups, family, peers, colleagues, and be able to function when meeting strangers. But we also have psychological needs such as respect, efficacy, and autonomy (Deci and Ryan 2000). Social needs require conformity to norms and social hierarchies. These potentially undermine the satisfaction of psychological needs, thereby creating a tension between fulfilling psychological and social needs. We need social interaction to fulfill psychological needs but if we subordinate ourselves to social relationships, we deprive ourselves of psychological need satisfaction.

The higher-order values can be collapsed into two dimensions due to the conflict between needs and the dynamics of need fulfillment, as seen in Figure 2-1. The goals and motivations of self-transcendence values are opposed to those of self-enhancement values. One cannot treat everyone equally and share resources for the common good while pursuing the domination of people and resources. Similarly, conservation values are opposed to openness to change values. You cannot both conform to societal and group standards to make the environment predictable and seek new experiences and uncertainty through stimulation and self-direction.

Empirically the opposition between values has been demonstrated (Schwartz 1992, 2015). Individuals who value self-transcendence tend to value self-enhancement less, while those who value openness to change tend to value conservation less. Note that each dimension contains both a social and personal focused value, as well as a basic and growth need motivated value. Individuals use one pole as their main motivating and goal setting criteria and therefore

disproportionately focus on either social or personal goals and satisfying basic or growth needs. The dimensionality implies that value orientations fulfill more than their motivating need, as no need can be ignored completely. For example, conservation values are also likely to satisfy esteem and love needs. Conformity values motivate individuals to follow social convention, and thereby are likely to be an accepted and respected member of the group. Similarly, self-enhancement values, which are predominantly based on esteem needs are likely to meet self-actualization needs. Those who seek respect, develop socially valued skills, and a positive self-image are likely to find stimulation and opportunity for autonomy. However, the growth-oriented needs assume a steady supply of basic need fulfilling resources. Prioritizing openness to change, that is, stimulation and self-direction challenges group membership criteria. Likewise, individuals who prioritize self-transcendence are likely to face resistance from gatekeepers who want to safeguard their power and status.

Figure 2-1 The Circumplex of Basic Human Values (Schwartz 2012:669)



The structure of values allows researchers to hypothesize relationships between outcomes, such as health or volunteering, with all value types (Schwartz 2015). That is, the magnitude of the relationship between an outcome and values will follow a sine curve, monotonically decreasing

up to 180 degrees around the circle, and then monotonically increasing again. The circumplex of values in Figure 2-1 is partitioned only for methodological purposes. Measuring personal values requires asking about specific goals and ideals, and these change from instrument to instrument. However, all values can be integrated into the theory of basic human values and placed on the circumplex. Indeed, Schwartz has changed the number of values through theoretical and empirical refinement (Schwartz 1992; Schwartz et al. 2012).

Table 2-1: Values, Definitions, Needs and Example Items

Value: definition (Schwartz et al. 2012)	Universal requirements	Example items from the PVQ21 (Schwartz 2003:311:314)
Power: social status and prestige, control or dominance over people and resources	Interaction, group	It is important to him* to be rich. He wants to have a lot of money and expensive things.
Achievement: personal success through demonstrating competence according to social standards	Interaction, group	It is very important to him to show his abilities. He wants people to admire what he does.
Hedonism: Pleasure and sensuous gratification for oneself	Organism	Having a good time is important to him
Security: safety, harmony, and stability of society, of relationships and self	Organism, interaction, group	It is very important to him that his country be safe from threats from within and without. He is concerned that social order be protected.
Conformity: restraint on actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	Interaction, group	It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.
Tradition: respect, commitment and acceptance of the customs and ideas that traditional culture or religion provides	Group	He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.
Benevolence: preservation, and enhancement of the welfare of people with whom one is in frequent personal contact	Organism, interaction, group	It's very important to him to help the people around him. He wants to care for other people.
Universalism: understanding, appreciation, tolerance and protection for the welfare of <i>all</i> people and nature.	Group, organism	He thinks it is important that every person in the world be treated equally. He wants justice for everybody, even for people he doesn't know.
Stimulation: Excitement, novelty, and challenge in life	Organism	He thinks it is important to do lots of different things in life. He always looks for new things to try.

Table 2-1: Values, Definitions, Needs and Example Items

Value: definition (Schwartz et al. 2012)	Universal requirements	Example items from the PVQ21 (Schwartz 2003:311:314)
Self-Direction: Independent thought and action-choosing, creating, exploring	Organism interaction	He thinks it's important to be interested in things. He likes to be curious and try to understand all sorts of things.

*When these items are administered in a survey the personal pronoun is matched to the respondent's gender.

2.3 How are Values implicated in behavior?

Our needs give good reason to find something desirable, but in our everyday usage we refer to values when choosing or judging behaviors and events. One of the main problems of studying values is succinctly stated by Maio (2010:9) "people refer to values in ways that are abstract, but then when applying them people must do so concretely". In other words, social scientists need to understand the process of how abstract ideas are applied. Psychologists tackle this problem by examining how values function in cognition and emotion using dual-process models of cognition. Recently, these insights were introduced to sociology and well received (Lizardo et al. 2016; Vaisey 2009).

2.3.1 Dual-process Models

Dual-process models are the hegemonic paradigm in cognitive psychology. The basic insight is that human cognition has two processes, one is fast, automatic, and largely unconscious and the other slow, deliberate, and largely conscious. Fast thinking occurs through a process as Hutcheon described. That is, our brains consist of many cognitive structures which are neural networks of associations build from experience. When stimuli activate one of these, there is a simple like versus dislike mechanism that produces behavior. This process relies on emotion and association. It simply processes stimuli through a network of associations. When needed, the deliberative process can over-ride this automatic thinking. Overtime the deliberative process can change the automatic as the connections between or within structures adjust to experience.

Vaisey (2009) used dual-process models to integrate two schools of thought in cultural sociology. One camp takes culture as a toolkit for posthoc rationalization and the other takes culture as socialized motivation. Vaisey shows that the dual-process model of cognition can integrate these two perspectives by arguing they are not mutually exclusive. The motivation perspective is criticized because it fails to account for the inconsistency or incapability of people

to explain their behavior. Vaisey points out that this criticism makes a crucial and untenable assumption: motivation is explicit, deliberative, and logical. According to dual-process models there is a cognitive mechanism that is socialized, like Bourdieu's habitus (1986), Haidt's elephant (2001), or Giddens's (1992) practical consciousness. It is deeply internalized and mostly automatic. The other mechanism is deliberative, voices justifications, and considers context, like the toolkit perspective (DiMaggio 1997). This general framework has already been applied to values research by psychologists and sociologists.

2.3.2 Values, Cognition, and Emotion

Cognitive structures are the building blocks of dual process models. Cognitive structures are defined as a set of concepts that vary in abstraction, breadth, accessibility and are attached to emotions and associated with similar and opposing cognitive structures (Fischer 2017; Hanel et al. 2017; Lindenberg 2009; Maio 2010). These can be examined at the system level, at the individual level and the level of cognition. Experimental and survey research has provided evidence that personal values are related to emotions, that these relationships follow the circumplex structure and operate in conscious and unconscious modes of cognition.

At the system level, values are related to each other, the theoretical underpinning of which has been described previously in this chapter. Experimental evidence shows that priming values affects emotional states and behavior associated with it and decreases emotional states and behaviors associated with opposing values. Additionally, priming opposing values creates ambivalent emotions (Maio 2010).

At the level of individual values, Maio (2010) contends that values are mostly linked to affect rather than information. He argues that since values are generally agreed upon conceptions of the desirable, they are rarely attacked. Instead, people react and support their values through affect. In experiments, researchers found that asking participants to elaborate on their values induced changes in the rating of values, however, this only occurred if participants had not rationalized their values previously (Maio 2010).

Experiments also show that values are related to the ideal and ought selves as envisioned by Self-Discrepancy Theory (SDT)(Higgins 1987, 1997). In SDT, ideal guides are the version of the self you aspire to be, while the ought self is what you should be. Incongruencies between the actual and the ideal-self create dejection emotions, like sadness, while incongruencies between actual and ought-self create agitation emotions, like anxiety. Experimental studies

show that the ought and ideal self are associated with the least and most important values, respectively, and that acting in violation of these values elicits the theorized emotions (Maio 2010).

At the level of cognition, values are mental representations of a class of objects (Hanel et al. 2017). That is, they are generalized ideas. For example, we have a general idea of dogs which includes body shape, number of legs, the shape of the head, and tail. Subsumed in this schema are instances of dogs, such as a standard poodle or ridgeback. Different types of dogs are more like the generalized idea than others. Each instance of a dog is graded on some criteria, which can include a central tendency, ideal, or familiarity. The central tendency characteristics are simply the mean, median or modal characteristics of categories. Ideals are necessary characteristics while familiarity refers to the frequency and intensity of exemplars.

As we encounter more instances of dogs, we update the schema to discriminate between objects that are dogs and those that are not. However, the border between one cognitive category and another can be fuzzy, which makes it easier to fit objects into that category. The context also influences how objects are categorized. The context primes which categorization is used. Furthermore, reactions towards the objects categorized depend on how typical the object is of the category (Hanel et al. 2017). In the case of values many objects and behaviors can be categorized as instantiations because values are general ideals. Additionally, what is considered an instantiation is dependent on the context both situationally and culturally. Therefore, the relationship between values and behavior varies considerably across contexts and cultures.

Miles (2015) demonstrates the variation in the applicability of values to behavior. Using the European Social Survey, he regressed values on several domains of behavior: religion, social activities, family, prosocial behaviors, politics, and time use. He theorized that values have the greatest effect when other influences on behavior, such as norms, are lower. Contextual freedom was measured with the social progress index – which measures the extent of personal rights, freedom of choice, tolerance, and inclusion.

Miles shows that values have a wide range of effect sizes on all behaviors. Some are consistently zero and others range from 0 to 0.18 (standardized), yet other outcomes such as time use, have both positive and negative relationships to values. Overall, values have a relationship with 59% of behaviors and are related to some behaviors in all countries. Thus, values range in the

strength and applicability to behavior across countries. As theorized, values predict more behaviors in countries with a higher social progress index.

In an online experiment, Miles shows that both implicit and explicit cognitive processes link values to behavior. Individuals rated their values and played the dictator game, where respondents are given raffle tickets and told the respondent after them was not given any. The number of tickets given away to the other respondent is a measure of pro-social behavior. Respondents were either allowed to play normally or had to remember an 8-digit number. This distinguishes respondents who can use explicit and implicit cognition from those who can only use implicit cognition. In both conditions, respondents who valued self-transcendence gave away more tickets, but self-transcendence had a greater effect when using only implicit cognition.

2.3.3 Mechanisms of Individual-level Value Change

Personal values are difficult to change because they are cognitive schema central to the interpretation of the world. Schema guide cognition and memory so that congruent information is encoded and retrieved easily. Furthermore, attention is focused on stimuli that fit into the schema while information that is not congruent is reinterpreted to become congruent, creating confirmation bias. Personal values are also stable because we do not consciously reflect on why a value is important. Most values are learned intuitively through experience and grounded in cultural narratives. Without experiences that challenge values, they are unlikely to change. Nevertheless, values do change through adaptation to new contexts such as migration, aging, or life-course events (Bardi et al. 2014; Knafo and Schwartz 2001; Konty and Dunham 1997; Lönnqvist, Leikas, and Verkasalo 2018; Milfont, Milojev, and Sibley 2016).

Bardi and Goodwin (2011) propose two routes of value change: a conscious (effortful) and an unconscious route. Either route starts with an environmental cue that either unconsciously primes the value or brings it to attention. Personal values, as cognitive schema, frame our experiences by guiding attention and memory. As a result, repeated cues strengthen associations with other schema and prime it for future use. In daily interaction, values shape our experience outside of awareness. However, if there are discrepancies between what needs to be done and what we think is important, our values are likely to create conflict. Thus, values can change through repeated emotional experiences or cues in our environment. Over

repeated interactions, values change so that attention is guided to information important for goal completion.

Reflection can also change values. Maio (2010) and Rokeach (1973) have experimentally shown values change in the short and long term after reflection. Rokeach confronted participants with inconsistencies in 1) their value system 2) their behavior and values or 3) information from significant others and their values. Self-dissatisfaction induced by the procedure caused value change. Bardi and Goodwin (2011) argue that the effortful route is less likely because values are close to self-conception and some are supported by reason.

2.4 Conclusion

Value is a disputed concept in sociology. Over the last century many research programs claimed to study values or put them at the center of a theoretical framework. However, many of these examined attitudes. In this chapter, I combined theories from sociology and psychology on values to clearly distinguish values from other concepts and to provide a theoretical framework of their workings within cognition, the individual, and their relationship to forces outside the individual, such as culture and norms.

Kluckhohn's definition of values from 1951 is still relevant today, however, it has taken several decades for the social sciences to fully uncover how the cognitive, affective, and selective properties of values work and how to integrate these into research. Advances in psychology and the field of values allowed Schwartz to derive the content and structure of values based on the needs of individuals. Schwartz argued that values can be captured by two dimensions, one which juxtaposes self-transcendence to self-enhancement, the other juxtaposes openness to change to conservation. Needs as the basis for values is a powerful idea for two reasons. First, it allows a theoretical argument to be made about the relationship between values. This aids interpretation when values are related to other variables. Second, it implies that values are a product of social-economic inequalities and therefore implicated in the production and reproduction of social structures.

To understand how social structures are linked to values we need to understand how values are involved in cognition and how they relate to culture. Using dual-process models, we can understand values as cognitive structures build from experience. When activated, stimuli are most often processed outside conscious awareness. However, we can override our automatic responses. Through these two processes, values act as cross-situational criteria that provide

both direction and motivation to behavior. In the following chapter, I will examine how values are products of and produce inequalities between genders, social class, and within the household.

Chapter 3 Associations with Personal Values: Gender, cohort, household and social class.

Several research programs demonstrate that the social environment shapes our values and that values shape our life-course. Personal values are associated with aging, family, occupation, stratification, and change across cohorts (Hakim 2000; Inglehart 1977; Kohn 1959, 1989; Lesthaeghe 2010; Mortimer et al. 1986). Positions that impact the wealth, access to resources, and the opportunity for self-direction are associated with higher ratings of openness to change and lower ratings of conservation values, while positions and characteristics of individuals that shape interpersonal interaction are associated with self-transcendence and self-enhancement values.

In this chapter, I establish whether these same associations exist in the Netherlands with the European Social Survey (ESS) data from 2002 to 2016. There are several reasons why these associations may differ. Most research was conducted using large cross-national data sets or data from the United States of America. The Netherlands presents a case and may deviate from the average. Additionally, these data were collected in the 1950s to 1970s. Changes in the cultural, social, and economic conditions may have changed how values are related to positions and outcomes. In this chapter, I divide the data by gender, cohorts, and age groups to make comparable groups and examine whether these differ in their values across household structures and social class.

The association between position and personal values can be straight forward, as is the case with cohorts and conservation values. Cohorts that are born in more affluent times can satisfy their basic needs, which conservation values addressed, and so find these less important. There is no chance for reverse causality or selection, although change over the life-course has not been ruled out. A more complex question is why personal values are related to household structure. Do people select into certain types of household formation or does living in certain households shape values? This chapter will not address these causality issues but simply describes associations.

Cross-sectional data limits the interpretation of results beyond causality. We cannot separate age, cohort and period effects. However, the ESS has run for a long time so that we can estimate the average values of adjacent cohorts in overlapping age ranges, if we assume that

period effects are negligible. This provides some indication of whether there are associations between values, age, cohort, gender, occupation, and household. To aid interpretation, sociological and psychological explanations for the association between values, cohorts, occupations, and the household are presented in the next section. This chapter first presents associations found between personal values, age, cohorts, and outcomes. Then it reviews major economic, political, and social changes in the Netherlands in the 20th century. This is followed by mean personal value ratings across several positions in society and the life-course.

3.1 Value Change Over Cohorts and the Life-Course

European countries saw widespread economic, cultural and social change in the 20th century; these set in motion value change through cohort replacement which created a “silent revolution” (Inglehart 1977). Inglehart and Welzel (2005) argue that industrialization promoted rational explanations and exerted control over the environment, thereby undermining religious authority and replacing it with secular-rational sources. Additionally, rising living standards secure existential needs and created more choice for individuals. As group membership is typically used to secure basic needs, individuals have less need or use for tradition and social conformity. Each successive cohort is therefore expected to rate conservation less important (H1). Inglehart and Welzel (2005) further argued that the rising educational attainment, access to information and less restrictive social networks, which post-industrialist society provides, creates the conditions for intellectual autonomy and the possibility to pursue self-expressive values. Therefore, it is expected that openness to change is higher in younger cohorts (H2). Additionally, changes in conservation and openness to change are expected to be symmetrical as group membership encroaches on an individual’s autonomy (H3).

Personal values also change with age as individuals adapt to their age normative life tasks and psychosocial development (Bardi and Goodwin 2011; Erikson 1982; Settersten 2003). Youth and adolescents are tasked with developing a sense of competency, identity and establishing peer relationships. This period is associated with self-focused values which include stimulation, self-direction and achievement (Cieciuch, Davidov, and Algesheimer 2016; Vecchione et al. 2019). In adulthood and old age, values shift towards a social focus as family commitments, political and social engagements and inter-generational transmissions becomes central to life (Konty and Dunham 1997; Milfont et al. 2016). The youngest respondents (18-35) within a cohort are likely to value openness to change and self-enhancement more than older

respondents (H4). The oldest respondents (55+) likely value self-transcendence and conservation more than younger respondents in the same cohort (H5).

As individuals move through the life course they make choices based on values and adapt their values to changing resources and constraints (Konty and Dunham 1997; McCrae and Costa Jr. 1994). Some major life-course events and transitions occur through family and household formation. The second demographic transition narrative argues that the increase in openness to change values and decreases in conservation values over cohorts led to an increase in non-conformist demographic behavior, including non-marital cohabitation and childrearing outside of marriage (Lesthaeghe 2010; Van de Kaa 1987). Moreover these household forms are argued to leave an imprint on the value development of individuals (R. Lesthaeghe and Moors 2002). Therefore, we can expect divorce and separation to be associated with greater openness to change (H6), while married cohabiting families to be associated with higher conservation values (H7). However, the timing, pattern and meaning of these household events have considerably changed in Europe over the 20th century (Blossfeld 2005; Blossfeld and Hakim 1997; Blossfeld and Kiernan 1995; Coontz 2006). The associations between household and values may therefore not be clearly distinguishable as the age group in which these transitions occur differ across cohorts.

3.1.1 Occupations and Values

Social class and the content of occupations are associated with personal values (Kohn 1959; Mortimer et al. 1986). Previous research found that more advantaged social classes are more open to change while the less advantaged are more conservation oriented (Kohn 1989). Additionally, the extent to which occupations require interaction with individuals as persons is associated with self-transcendence values, while business oriented occupations are related to self-enhancement values (Johnson 2002; Mortimer 1975).

Much of this research was conducted in industrial economies and it is unclear to what extent these relationships have changed in post-industrial economies. Several developments have changed the content of work, the types of jobs available and the labor market. Educational expansion increased the skill level of labor supply, white collar occupations increased due to the expansion of government through the welfare state while globalization and automation have changed labor demand and the content of occupations. Overall, there has been an increase of highly skilled labor for professional, administrative, and managerial occupations but also an

increase in demand for low skilled labor in the service sector while the industrial sector has shrunk considerably. Moreover, the substantial increase in female labor participation has changed the occupational and social class landscape. Due to these changes, new cleavages within social classes formed (Hertel 2017; Oesch 2006).

These changes have posed significant challenges to the widely used EGP social class schema (Erikson, Goldthorpe, and Portocarero 1979). When applied to post-industrial societies, the EGP fails to capture distinctions within the higher professional, managerial and administrative occupations (Güveli, Need, and De Graaf 2007; Hertel 2017; Oesch 2006) and indeed almost 40% of individuals are amalgamated to the “service class” in the Netherlands (Breen 2004). The EGP is also unsuitable for the study of the association between occupation and values as it is designed to examine how the market situation of households influences the life chances of incumbents (Erikson 1984). When examining personal values, the everyday experiences at work are also important, such as the position within the organizational structure, social roles and tasks performed at work (Kohn and Slomczynski 1990). Indeed, one previous study found no relationship between the EGP and personal values (Meuleman et al. 2012). The Oesch class schema is more suitable (Oesch 2006). It divides occupations into three work logics based on the daily work experience (Esping-Andersen 1993; Gallie 1998; Kriesi 1989) and considers changes in the labor market due to changes in the sectors of economic activity, gender, and educational attainment. Oesch proposes three work logics which have qualitatively different skill requirements, work processes, authority, and client relations.

The organizational work logic (OWL) is structured by organizational imperatives. The division of labor and job tasks are determined by the goals of the organization. Thus, individuals have the organization’s goals foremost in mind and are likely to follow a clear hierarchical command structure. Managers need to coordinate and control, while clerks apply rules and procedures. Managers are therefore likely to value self-enhancement (H8).

The interpersonal work logic (IWL) requires attending to the client’s needs and emotions within culturally defined scripts. The IWL orients practitioners towards the challenges and problems of their clients. Authority relations are distinct from other work logics in that client interaction and feedback rather than supervision and productivity evaluations control their work. Therefore, individuals working in the high and low skilled IWL are likely to value self-transcendence more than other work logics (H9).

The technical work logic (TWL) is distinguished by the work process which is controlled by technical parameters. These also define the level of autonomy and authority and client relations. At higher skill levels practitioners have autonomy to respond to novel problems while at lower skill levels, autonomy and control is largely determined by the organization of the production process, as with the organizational work logic. In terms of authority relations higher skilled technicians work outside the official command structures while the lower skilled technicians follow authority relations. The technical experts are likely to value openness to change as their job complexity requires independent thought (H10).

3.1.2 Gender and Values

Gender is an important factor which shapes values and the life-course. Gender has a direct effect on values because it is one of the basic social categories which frames social interaction (Ridgeway 2009; West and Zimmerman 1987). Gender shapes self-conceptions as the self is a cognitive schema susceptible to social influences. To varying extents, we incorporate gender stereotypes into our self-concept and our personal values. Research on stereotypes shows that men are perceived as more dominant, assertive, competent, competitive and ready for leadership than women while women are seen as communal and caring (Greenwald, McGhee, and Schwartz 1998; Ridgeway and Correll 2004). In line with these stereotypes, research has found that women are more self-transcendence oriented than men while men are more self-enhancement oriented than women (Johnson 2001b; Milfont et al. 2016; Schwartz and Rubel 2005; Schwartz and Rubel-Lifschitz 2009). Therefore, I expect men in the Netherlands to value self-enhancement more than women while women will value self-transcendence more than men (H11).

Gender also affects the life course as institutions do not provide men and women the same opportunities. For example, childrearing is associated with significant career penalties for women but not for men. This partly stems from the fact that women must interrupt their labor market participation, but also from the ensuing gendered division of labor and employer discrimination (Grunow, Schulz, and Blossfeld 2007; Hendrickx, Bernasco, and de Graaf 2001; Portegijs and Brakel 2016). These prospects impact the values of men and women, as they know from an early age what is expected of them and what they can expect from the future. However, if anything changed in the 20th century, it was gender relations.

Differences in values between men and women are likely to change over cohorts as the sexual and gender revolutions provided new roles and opportunities for women (Blossfeld and Kiernan 1995; England 2010; Esping-Andersen 2009). One may assume that men and women become more equal in their values as gender equality increases. That is, values should converge as basic and psychological needs are increasingly satisfied for both men and women. However, one cross-national study showed the opposite (Schwartz and Rubel-Lifschitz 2009). Additionally, gendered behavior in occupation and schooling choices is also increasing rather than decreasing with greater equality of opportunity. An explanation is that men and women express their gendered selves, thereby recreating the gender stereotypes which they have internalized (Cech 2013; Ridgeway and Correll 2004). It is therefore unclear whether men and women will converge or diverge in their values over cohorts. I expect that men and women will converge in their conservation and openness to change values in younger cohorts (H12) which address basic needs such as survival and psychological needs of autonomy and stimulation, respectively. Men and women have similar chances to fulfill these needs. However, gender still shapes interpersonal interaction by creating status hierarchies and the internalization of gender stereotypes. Therefore, self-enhancement and self-transcendence values are likely to diverge. (H13).

3.2 The Context of the Netherlands

The economic and social development of the Netherlands differs in some respects to the overarching narrative of 20th century Europe. The major divergences occurred through an interaction between the pillarized social-political decision-making process and the timing of economic shocks. In this section, I will review the economic and political changes in the 20th century and their consequences for the labor market and family formation.

Due to its neutrality in the First World War, the Netherlands fared quiet well in the interwar period (Wielenga 2012). It was not until other countries gave up the gold standard and devalued their currencies that the economic depression made a large impact in 1931. The depression lasted longer because of political reluctance to devalue. Eventually the gold standard was abandoned, and the gulden devalued in 1936 after which recovery started. The Netherlands fared less well during and immediately after the Second World War. Large parts of the agricultural land, logistics infrastructure and capital assets were removed or destroyed. Additionally, the Netherlands fought a war with its former colony, Indonesia, until 1949, which

had contributed 14% of GDP. The Dutch economy was in a dire state and only recovered through the investment of the Marshall Plan which arrived in 1948.

Throughout the 50s and 60s the Dutch economy grew. Part of the success is attributed to the government regulated wages and prices. Wages were tied to the inflation rate to maintain employees living standards. After 1953, wages could also increase due to labor productivity in order to foster international competitiveness. However, labor shortages pushed wages up, which grew faster than inflation from 1953 until 1975 (Centraal Bureau voor de Statistiek 2010). In the 1960s real income increased by 6% per year on average. The welfare of Dutch citizens therefore increased tremendously in these years.

Coupled with the newfound welfare were changes in the politics and government. First, a successful social-democratic party emerged, the Party van de Arbeid (labor party), which gathered support from different pillars of society and formed cabinets with the Catholic people's party (KVP) until 1958. Secondly, broad support for a social safety net emerged with input from employers, employees, and experts. To facilitate the development of the country, the Social Economic Council was established in 1950 and the Central Planning bureau in 1945 (Wielenga 2012). A period of welfare state expansion ensued from 1957 to 1967, adding benefits for the elderly, widows, orphans, those with work disabilities and a means tested income benefit to combat poverty (Liefbroer and Dykstra 2000). Dutch governments became more interested in international politics, especially fostering international trade. The Netherlands is one of the founding members of the European Coal and Steel Community and the European Economic Community which culminated in the European Union. However, they have always resisted attempts at political integration.

The education system also expanded and changed throughout the postwar period. The education system was very rigid before the 1960. Secondary school tracks were aimed specifically at boys or girls and were attended predominantly by specific social backgrounds. For example, the 'huishoudschool' prepared girls for household duties which was attended mostly by working class girls while the 'ambachtsschool' prepared boys of working class background for technical and craft occupations (Luijkx and de Heus 2008). Once students enrolled in a secondary track there was no possibility of switching. Nevertheless, the education system expanded quickly. Mass secondary education was achieved for those born between 1955-1964. In this cohort 60% of men and women attained a secondary degree and 30% attained a

tertiary degree (Breen et al. 2009, 2010). However, gender differences in educational attainment persisted for this cohort. Men were significantly more likely to attain secondary and tertiary degrees than women (Breen et al. 2010). Gender equality in educational attainment was attained in the 1961-1970 cohort (Liefbroer and Dykstra 2000).

In other respects, the immediate post-war landscape resembled that of the 1920s. Dutch society combined social, political, and economic spheres of activity in three distinct pillars: the protestant, catholic and socialist. These had their own political parties, sports organization, unions, newspapers and even went as far as having separate butchers and bakers. The 1950s is the height of the pillarization of Dutch society where broad consensus between elites and economic growth quietly ushered in industrialization, modernized the country, and build a conservative welfare state. All pillars advocated separate gender spheres: the male breadwinner and female housekeeper. Norms and institutions supported this household arrangement, thereby closely connecting family and career paths. Men were to find full-time employment to support a family. Women worked until marriage at which point their labor was invested in the family and the household. However, modernization also provided more independence for the generation born after the wards and in the 1960s the hold of elites over their pillars began to slip.

Politically pillarization ended in 1972 when parliamentary elections revealed a stark decline in the popularity of established parties (Wielenga 2012). The KVP which had received 30% of votes up to 1963, managed only 17.7% in 1972. The political landscape fragmented as votes went to non-denominational parties on the left and right in 1972. The Christian and conservative elements of Dutch politics reorganized. In the election of 1977 several Christian parties merged to form the Christian Democratic Appel (CDA). It attained a majority in the 1981 elections.

Despite the prominent position of Christian parties, secularization, and individualization of social life continued. By the early 80s half of all Dutch people did not affiliate with a specific denomination and the CDA had to downplay their denominational identity to remain in power (Wielenga 2012). The decline of traditional authority provided room for feminism in political and social debate. The second wave of feminism is usually attributed to have started in 1967. Proponents called for equal rights, pay and education but also brought to light inequalities within the household (Liefbroer and Dykstra 2000). Other signs of Dutch society opening are

reforms made to the education system. The Mammoetwet, implemented in 1969, made significant reforms to the education system. The number of secondary education tracks was reduced and reorganized into pre-vocational, vocational and pre-university tracks and the mandatory years of education expanded to age 15. However, it was not until 1982 that another law extended the mandatory age to 17 and abolished vocational tracks which prepared women for household duties and made it easier to switch between different tracks within secondary education.

These social and cultural changes relaxed social norms and social control on the sequencing and timing of family and household formation. Additionally, changes to women's resources contributed to changes in family and household formation. Women gained greatly in educational attainment from 1950s onwards. The invention of reliable contraceptives made the planning and delays in fertility feasible and gave women greater control over their life-course. Cohabitation quickly gained ground. In the 1951-60 cohort, 38% of first unions were unmarried cohabiters, while in the 1961-70 cohort, 68% of first unions were unmarried cohabiters (Feijten and Mulder 2002). Secondly, the age of marriage increased. The median age of marriage for women was 23 up until 1960 (Billari and Liefbroer 2010). In contemporary Netherlands, most men and women cohabit in their early 20s, often with several different partners, before marrying in their early 30s (Liefbroer and Dykstra 2000). Not only are individuals experiencing events later, the time between events and the variability in timing has also increased (Studer, Liefbroer, and Mooyaart 2018). In the 1930s two patterns account for 75% of family formation before age 30. These two patterns account for 31% of individuals in the 1960s (Liefbroer 1999). Lastly, childbirth outside wedlock has become widely acceptable. In 2010, 40% of all births occur out of wedlock while in the 1960s only 6% did (Lesthaeghe 2010). Normative changes and the changing position of women in society opened household and family formation to alternative paths in the 1960s. In the 2000s, economic factors brought on by globalization have de-standardize and postponed family formation as individuals react to economic shocks in their particular cohort and social class (Blossfeld 2005; Liefbroer 2005; Studer et al. 2018; Zimmermann and Konietzka 2018).

In most European countries, female labor market participation rose from the 1950s onward but it was delayed until the 1970s in the Netherlands and did not take off until the 80s (Blossfeld and Hakim 1997). Before the late 1960s, women's employment was normatively

discouraged within pillarized Dutch society. After the 1960s there was little impetus for change. Households enjoyed a high level of welfare due to wage regulation, while a steady supply of labor was recruited in the 1960s through bilateral agreements with Italy, Spain, Portugal, Turkey, Greece, Morocco, Yugoslavia and Tunisia (Jennissen 2011). However, the economy stagnated from 1973 until the 1980s, which led to unemployment and restructuring of the labor market. The oil crises of 73 and 79 drove up unemployment and new labor regulation was needed. It arrived in 1982 with the Akkoord van Wassenaar. In this agreement the government, labor unions and employer associations negotiated collective employment contracts. The agreement introduced more flexibility for employees and employers, including part-time contracts, early-retirement, and work hour reductions. This saved employers from paying full-time wages while offloading employees to the government through early retirement. Additionally, the number of jobs increased through the proliferation of part-time work which lowered unemployment and provided work for women who helped maintain household income. These developments institutionalized part-time employment which now provides similar rights and similar pay to full-time work (Blossfeld and Hofmeister 2006; Blossfeld and Kiernan 1995; IBO 2019).

The Akkoord van Wassenaar ushered in the one and a half earner household (IBO 2019). One reason the Netherlands did not become a dual-earner country is that other social policies prevent women from combining paid and care work. For example, although maternity leave was implemented in 1930 and provided 12 weeks of wage compensation, it has increased little since then (Gauthier and de Kleine 2014). Parental leave was implemented in 1997 as an uncompensated period of 26 weeks. Further disincentives for women's full-time employment are the high costs of childcare which are partially compensated based on a means level test of household income. Additionally, income taxes are determined individually but tax transfers can be made at household level with tax incentives for the least earning member to work part-time². As a result, the marginal return in income of one additional hour worked (after taxes and benefits) quickly falls below 50% when there are children in the household (IBO 2019). The combination of labor law, income and welfare state policies has encouraged part-time work.

² One tax incentive used to be referred to as 'aanrechtgeld', roughly translated as kitchen counter money. It was a tax return on the income of the highest earner and was given to the secondary earner. In 2009 a process started to phase out this tax return which will be completely abolished by 2024.

The Netherlands has by far the most part-time jobs in the EU which are primarily taken by women (Blossfeld and Hakim 1997; IBO 2019). Up until the 1970s female labor market participation was around 20% and did not increase substantially until after the Wassenaar Akkoord in the 1980s (Blossfeld and Hakim 1997; Blossfeld and Hofmeister 2006). De Graaf and Vermeulen (1997) show that women born before the 1970s would typically exit employment after being married. The relationship between marriage and LM exit decreases across cohorts (1925-1970) but the connection between LMP and family persists. The timing of LM exit shifts from marriage to the birth of the first child. Thus, while the percentage of employed married women before their first child increases from around 20% to 80% across the 20th century, most mothers do not return to full-time work but perform part-time work and most often only after their first child is old enough to go to (pre)school. In 2010, Female LMP reached 75% but the percentage of women in full-time employment has been stable at 20% since the 1980s (Portegijs 2008). The increase in LMP is therefore due to part-time working women who combine it with unpaid household labor and childcare while dual earner families are predominantly childless in the Netherlands (De Graaf and Vermeulen 1997; van Gils and Kraaykamp 2008; Hendrickx et al. 2001). Perhaps partly because of these trends, there is still a widespread belief that a mother's responsibilities and roles lie primarily with care work (IBO 2019; Kraaykamp 2012; Portegijs 2008; Portegijs and Brakel 2016).

The 20th century changed the cultural, social, and economic landscape of the Netherlands and reduced inequalities. Men and women have similar chances in the education system, are encouraged to enter the labor market and do not face strong social restrictions and norms on household or family formation. However, the political and cultural legacies and current dynamics created a conservative welfare state which prioritizes women's role within the household over paid labor. Overall, the Netherlands can still be characterized as a conservative welfare state that favors a male breadwinner and a female caregiver.

3.3 Data and Measures:

The European Social Survey (European Social Survey Cumulative File 2016) is a biannual cross-sectional population survey (2002-2016) which includes sociodemographic and household variables as well as the Portrait Values Questionnaire (PVQ21), a measure of values developed by Schwartz (2003). Data from the Netherlands is available in all waves. I wish to compare values between cohorts, age, social classes, households, and gender. The earliest year of birth

recorded was 1907 and the latest 2002. These represent individuals born before and after the post-material value shift (Inglehart 1990; Inglehart and Welzel 2005). Additionally, since the ESS has been running for 14 years, respondents from the same cohort can be observed during different ages. I take ages 25-65 as these cover major demographic and occupational life-course events. Respondents younger than 25 are excluded as previous research shows their values fluctuate considerably (Vecchione et al. 2019). Respondents older than 65 are excluded as we wish to compare the (potentially) employed population. The ESS contains 10490 respondents which match the cohort and age specifications. From these 298 respondents are missing on all value items. An additional 74 respondents are missing on household type. This leaves 10118 respondents in the sample for the comparison of cohorts and households. When comparing Oesch classes, a further 270 respondents are excluded for missing data on occupational codes.

3.3.1 Variables:

Cohorts were constructed based on periods of social and economic change and stability. The first cohort experienced economic depressions and war during early life. The second cohort born during the 1950s experienced economic recovery after the wars and a favorable labor market during labor market entry. Both cohorts were brought up in a pillarized society. Cohorts in the 1960s experienced economic welfare and social changes in gender and family. In the 1970s and 1980s, economic stagnation and recessions brought about changes to the labor market and welfare state. The table below shows the frequencies and percentage of respondents in each cohort.

Table 3-1 Cohorts in the ESS Data

Cohort	Frequency	Percent	Cumulative
1937-	1559	15.40	15.40
1950-	2589	25.60	41.00
1960-	2774	27.40	68.40
1970-	2238	22.10	90.50
1980-1992	958	9.50	100.00
Total	10118	100.00	

The PVQ21 presents respondents with portraits of an individual and asks them to rate, on a 1-6 scale, how alike they are to that person. For instance, respondents are prompted with “Thinking up new ideas and being creative is important to her. She likes to do things her own original way” and indicate “How much like you is this person” by the responses “very much like me” to “not like me at all”. The personal pronouns are matched to the gender of the respondent.

Respondents who indicated the same answer at least 15 times or have more than 25% missing data are excluded as recommended by Schwartz (2003).

The four value orientations proposed by Schwartz (1992) were constructed using multigroup confirmatory factor analysis in MPLUS 7.0 using the raw scores and computed using design weights. Table 1-3 shows the four value orientations, self-transcendence, self-enhancement, openness to change and conservation with their respective items. Each value orientation was computed separately and showed partial scalar invariance across waves, that is, an intercept on at least one item had to be freed in at least one wave, the details are provided in Table 3-2. Particularly wave 8 showed measurement variance, at least one intercept was freed for each value.

In the confirmatory factor analysis, the conservation items did not all load onto the same factor. There were large residual correlations between the two security items on the conservation factor. This indicates these items are interpreted and responded to differently than other conservation items and can therefore not be meaningfully compared (Davidov et al. 2014; Davidov, Muthén, and Schmidt 2018). The security items are not included in the measure of conservation. The model fit below refers to the model where conformity and tradition are one factor and the security items a separate factor. The scores for the security factor are not used. This caveat should not affect the utility of the associations presented as the other chapters in this dissertation focus on social conformity and tradition rather than national and personal security.

Table 3-2 Model fit of Multigroup Confirmatory Factor Analysis of Value Orientations

Value Orientation	RMSEA [95% CI]	CFI	TLI	Free Intercepts: Item (ESS Round)
Self-Transcendence	0.041 [0.037 – 0.045]	0.941	0.950	impenv (8)
Self-Enhancement	0.019 [0.012 – 0.026]	0.995	0.996	ipshabt (8)
Openness to change	0.040 [0.035 – 0.046]	0.973	0.975	impdiff (2 5 6 7) impfree (8)
Conservation	0.030 [0.026 – 0.035]	0.977	0.976	ipfrule (8) ipmodst (8)

Table 3-3 Value Orientations and their items and (values) from the Portrait Value Questionnaire 21 (Schwartz 2003:311:314)

Self-Transcendence
<ul style="list-style-type: none"> • It's very important to him to help the people around him. He wants to care for their well-being. (Benevolence) • It is important to him to be loyal to his friends. He wants to devote himself to people close to him. (Benevolence) • He thinks it is important that every person in the world should be treated equally. He believes everyone should have equal opportunities in life. (Universalism) • It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them. (Universalism) • He strongly believes that people should care for nature. Looking after the environment is important to him. (Universalism)
Self-Enhancement
<ul style="list-style-type: none"> • It's important to him to show his abilities. He wants people to admire what he does. (Achievement) • Being very successful is important to him. He hopes people will recognize his achievements. (Achievement) • It is important to him to be rich. He wants to have a lot of money and expensive things. (Power) • It is important to him to get respect from others. He wants people to do what he says. (Power)
Openness to change
<ul style="list-style-type: none"> • Thinking up new ideas and being creative is important to him. He likes to do things in his own original way. (Self-direction) • is important to him to make his own decisions about what he does. He likes to be free and not depend on others. (Self-direction) • He likes surprises and is always looking for new things to do. He thinks it is important to do lots of different things in life. (Stimulation) • He looks for adventures and likes to take risks. He wants to have an exciting life. (Stimulation) • Having a good time is important to him. He likes to "spoil" himself. (hedonism) • He seeks every chance he can to have fun. It is important to him to do things that give him pleasure (hedonism)
Conservation
<ul style="list-style-type: none"> • He believes that people should do what they're told. He thinks people should follow rules at all times, even when no one is watching. (conformity) • It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong. (conformity) • It is important to him to be humble and modest. He tries not to draw attention to himself. (tradition) • Tradition is important to him. He tries to follow the customs handed down by his religion or his family. (tradition) • It is important to him to live in secure surroundings. He avoids anything that might endanger his safety. (Security) • It is important to him that the government ensures his safety against all threats. He wants the state to be strong so it can defend its citizens. (Security)

Households are constructed using four variables: marital status, whether respondent lives with a partner, whether there are children in the household and ever had children in the household. Marital status is coded: 1. married/civil union 2. divorced/separated 3. widow 4. never married. Not all waves in the ESS distinguished between married and civil union, therefore these are collapsed into one category across waves. The percentage of respondents in a civil union is about 5% across waves. From these variables, six households of interest are constructed, their prevalence is shown in Table 3-4. These do not distinguish between married and unmarried cohabiters as cohabitation is often a temporary transition to marriage in younger cohorts (Studer et al. 2018).

Table 3-4 Household Types and their Percentage

Household Type	N	Percentage	Cumulative
Single	1488	14.70	14.70
Couple without Children	1488	14.70	29.40
Couple with Children	3984	39.40	68.80
Single Parent	654	6.50	75.30
Single (Separated/divorced)	930	9.20	84.40
Couple with Children outside household	1574	15.60	100.00
Total	10118	100.00	

Eight Social classes were constructed following the Oesch class scheme (Oesch 2006) with the do files from the ESS website. The class schema is based on the employment relationship (self-employed, employee), the number of supervisees/employees and occupational code (ISCO88 and ISCO08). I use the respondent's instead of the household social class as I am interested in the association between both social position and work tasks with personal values.

Table 3-5: Distribution of Oesch Classes in the ESS data

Respondent's Oesch class	N	Percentage	Cumulative
Self-employed professionals and large employers	278	2.80	2.80
Small business owners	968	9.80	12.70
Technical (semi-) professionals	569	5.80	18.40
Production workers	1143	11.60	30.00
(Associate) managers	2369	24.10	54.10
Clerks	1185	12.00	66.10
Socio-cultural (semi-) professionals	1702	17.30	83.40
Service workers	1634	16.60	100.00
Total	9848	100.00	

3.4 Analytical strategy:

Using cross-sectional data, it is impossible to distinguish cohort, period, and age effects. These difficulties were apparent as different parameterizations of multi-level regression models yielded contradictory results. I choose to use the simplest linear regression models to ease interpretation and emphasize the presented results are simple associations between several variables. I regress age on each personal value and specify different models for each combination of gender and cohort. These regressions are also run separately by household. The predicted scores are plotted with the 95% confidence intervals to make a visual comparison.

Comparisons between cohorts in the household figures is made difficult by the changing timing and ordering of events across cohorts. Married couples at age 25 will have married later than the median in the 1950s and most likely formed their union without prior cohabitation. In the 1980s, couples at age 25 married earlier than the median age and likely formed a cohabiting union and then married. Nevertheless, it may be informative to examine mean values of adjacent cohorts with overlapping age ranges. The results open with a cross tabulation of age categories, social class, and household by cohorts to show which categories are prevalent in consecutive cohorts. The figures on social class are based on interactions between social class and cohort as there were too few observations to distinguish between ages.

3.5 Results

Table 3-5 shows the distribution of ages, social class, and households across cohorts. In each cohort there are two age categories which make up about 50% of the observations. The oldest and youngest age cohorts are almost exclusively in one age category. In each cohort the Oesch classes are similarly distributed. The distribution of household types differs across cohorts. The 1980-1992 cohort is predominantly single or married couples (with children). In the 1970-1979 cohort the proportion of couples with children increases. In the 1960s cohort the divorced and separated as well as single parent increases. In the 1950s and 60s cohorts, married couples with children decline and the empty nest and separated/divorced respondents increase.

Table 3-6: Age, Social Class and Household Distribution by Cohort

Age Category	1937		1950		1960		1970		1980		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
25-34	0	0.00	0	0.00	90	3.20	1,036	46.30	908	94.80	2,034	20.10
35-44	0	0.00	91	3.50	1422	51.30	1,143	51.10	50	5.20	2,706	26.70
45-54	72	4.60	1249	48.20	1206	43.50	59	2.60	0	0.00	2,586	25.60
55-65	1487	95.40	1249	48.20	56	2.00	0	0.00	0	0.00	2,792	27.60
Total	1559	100	2589	100	2774	100	2,238	100	958	100	10,118	100

Oesch class	1937		1950		1960		1970		1980		Total	
	No.	%	No.	%								
Large employers	66	4.40	78	3.10	77	2.80	46	2.10	11	1.20	278	2.80
Small business owners	169	11.30	261	10.40	291	10.70	182	8.30	65	7.00	968	9.80
Technical professionals	47	3.10	112	4.40	176	6.50	154	7.00	80	8.60	569	5.80
Production workers	181	12.10	301	11.90	318	11.70	238	10.90	105	11.30	1143	11.60
Managers	329	22.00	534	21.20	692	25.40	628	28.70	186	20.00	2369	24.10
Clerks	188	12.60	330	13.10	329	12.10	239	10.90	99	10.70	1185	12.00
Socio-cultural professionals	264	17.70	448	17.80	428	15.70	353	16.20	209	22.50	1702	17.30
Service workers	249	16.70	456	18.10	411	15.10	345	15.80	173	18.60	1634	16.60
Total	1493	100	2520	100	2722	100	2185	100	928	100	9848	100

Household	1937		1950		1960		1970		1980		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Single	106	6.80	266	10.30	362	13.00	441	19.70	313	32.70	1,488	14.70
Couple No Children	191	12.30	305	11.80	282	10.20	409	18.30	301	31.40	1,488	14.70
Couple with Children	158	10.10	776	30.00	1,601	57.70	1,167	52.10	282	29.40	3,984	39.40
Single Parent	45	2.90	156	6.00	251	9.00	154	6.90	48	5.00	654	6.50
Separated/divorced	315	20.20	377	14.60	178	6.40	51	2.30	9	0.90	930	9.20
Empty Nest	744	47.70	709	27.40	100	3.60	16	0.70	5	0.50	1,574	15.60
Total	1559	100	2589	100	2774	100	2238	100	958	100	10118	100

3.5.1 Gender, Cohort and Age Differences

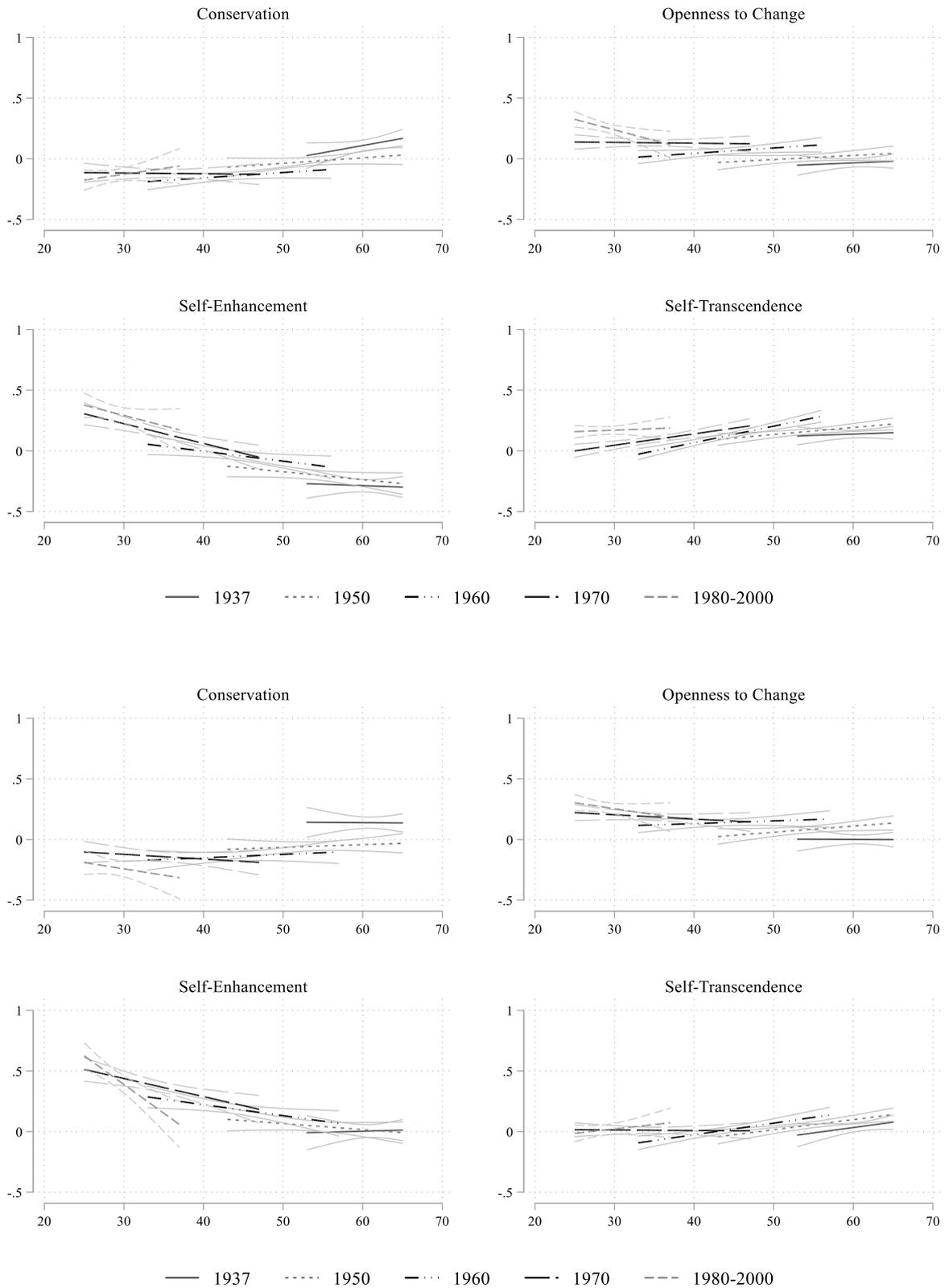
Figure 3.1 shows trends in the importance of the four higher order values over age by cohorts of women (top) and men (bottom). There are some clear cohort trends. Hypothesis 1 is supported for men. Conservation values are rated lower in importance in each successive cohort. More affluent cohorts born during the prosperous 60s rate conservation lower. A similar trend is observable in women's self-transcendence values which was not expected. H2 is supported, openness to change values are rated more important in younger cohorts of women and men. H3 is not supported, there is no clear correspondence between increases in openness to change and decreases in conservation. Changes in conservation are largest between the

oldest cohorts while the changes in openness to change are largest in younger cohorts. This is likely because cohort and age differences reinforce each other in the early and later life course.

Age trends within cohorts are also visible. H4 is partly supported, young women in the youngest cohort rate openness to change higher than older respondents. Men and women also rate self-enhancement higher before age 35. H5 is partly supported, women older than 55 rate conservation and self-transcendence higher than younger respondents in the 1950s cohort.

Gender difference clearly emerge as well. Women value self-transcendence more than men, while men value self-enhancement more than women (H11). Genders are converging in self-enhancement in the youngest cohorts, contrary to hypothesis 13, but show signs of diverging in terms of self-transcendence, corroborating hypothesis 13. In both cases the changes are due to the changing values of women rather than men. The increasing importance self-enhancement values of women may be due to their greater LMP, especially in full-time employment.

Figure 3-1 Mean Higher Order Values of Female (above) and Male (below) Respondents by Cohort over Age



3.5.2 The Household and Values

Figure 3.2 and 3.3 show there are relatively little cohort differences in conservation values between household types. Contrary to H7, coupled men and women are not more conservation oriented than singles in the same cohort. However, couples with children do seem to have a more stable valuation of conservation than other household arrangements.

Openness to change values differ between household types (Figure 3-5). Hypothesis 6 states that divorced women and men value openness to change more than their peers who are coupled. The difference in means is clearest in the age categories where divorce is common, 35-54 years of age. However, the large confidence intervals make the comparison dubious.

Figure 3-2 Conservation Values of Female Respondents by Cohort and Household over Age

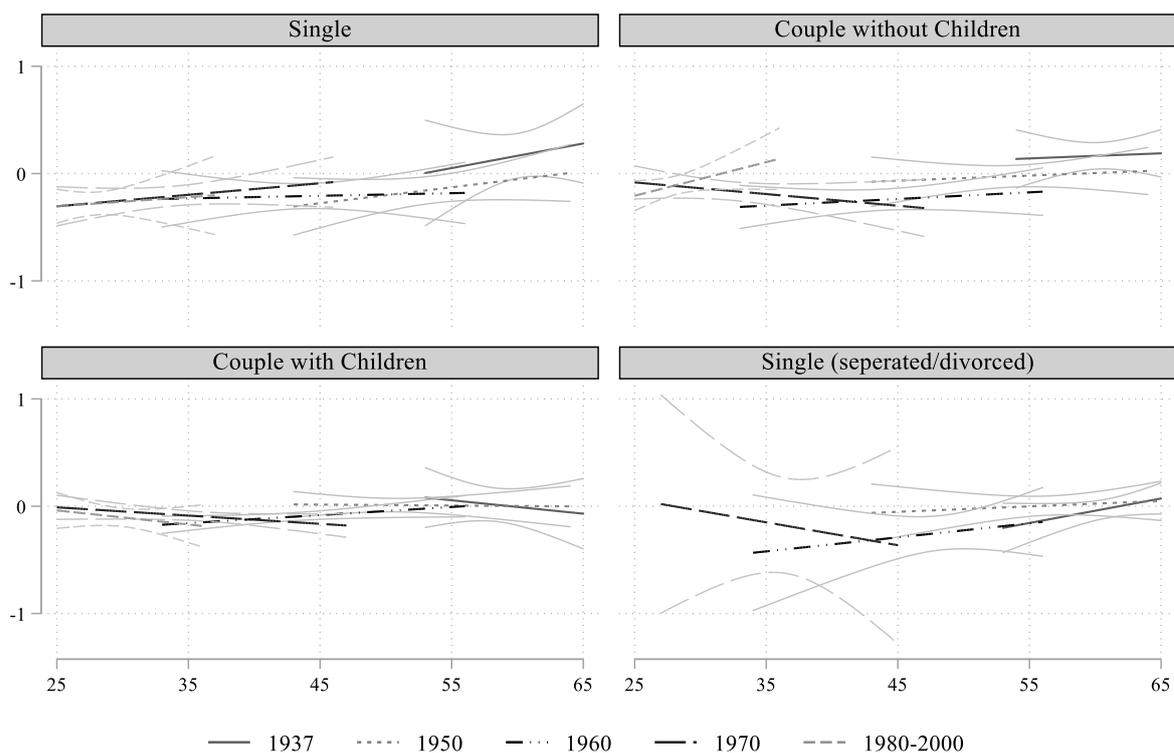


Figure 3-3 Conservation Values of Male Respondents by Age Category, Cohort and Household

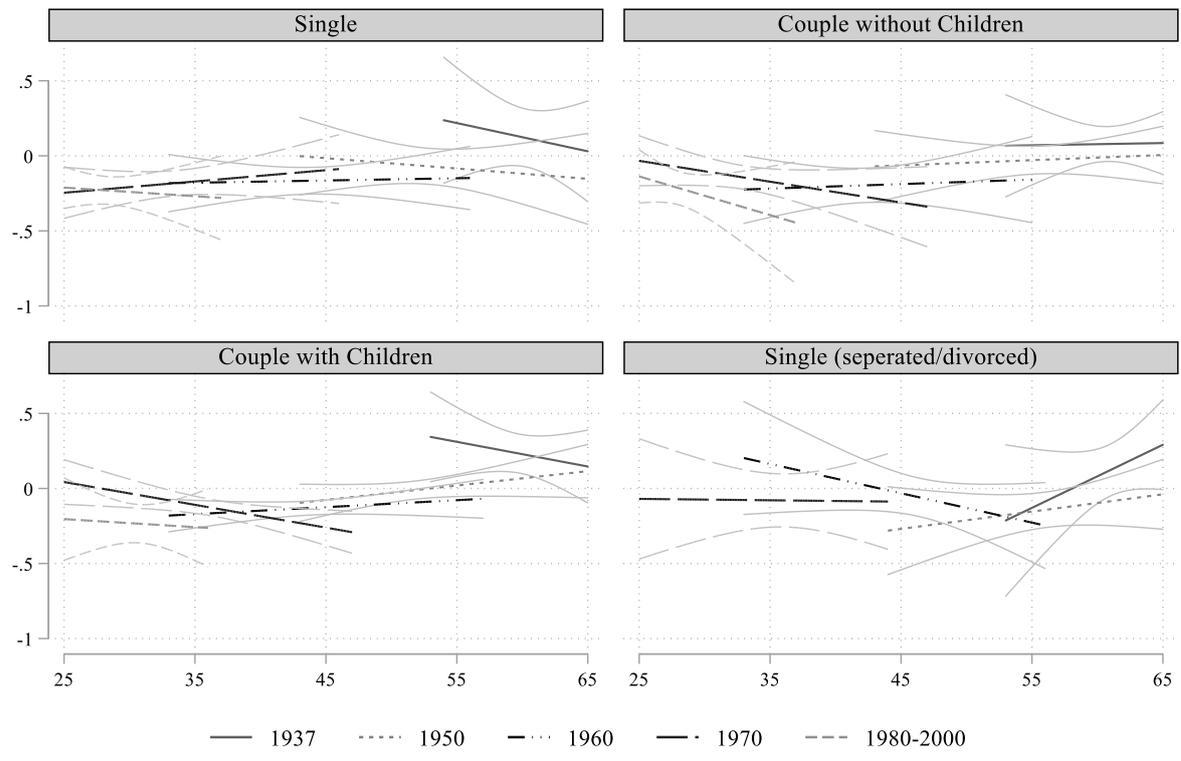
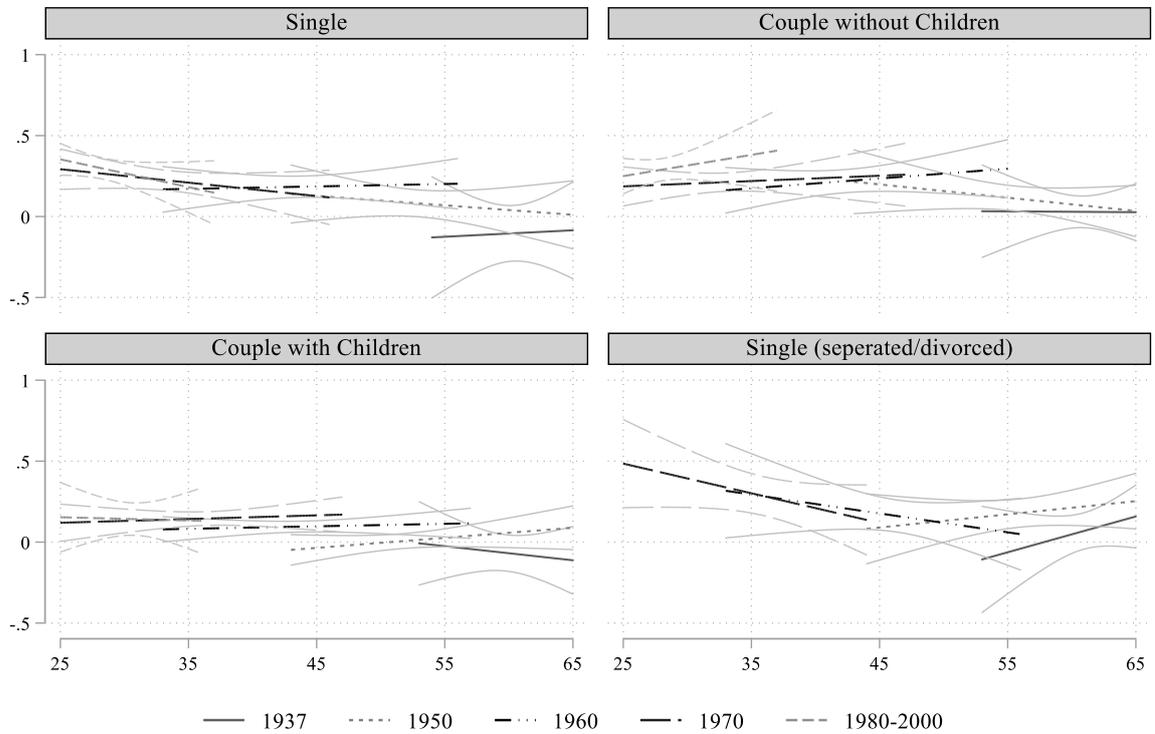
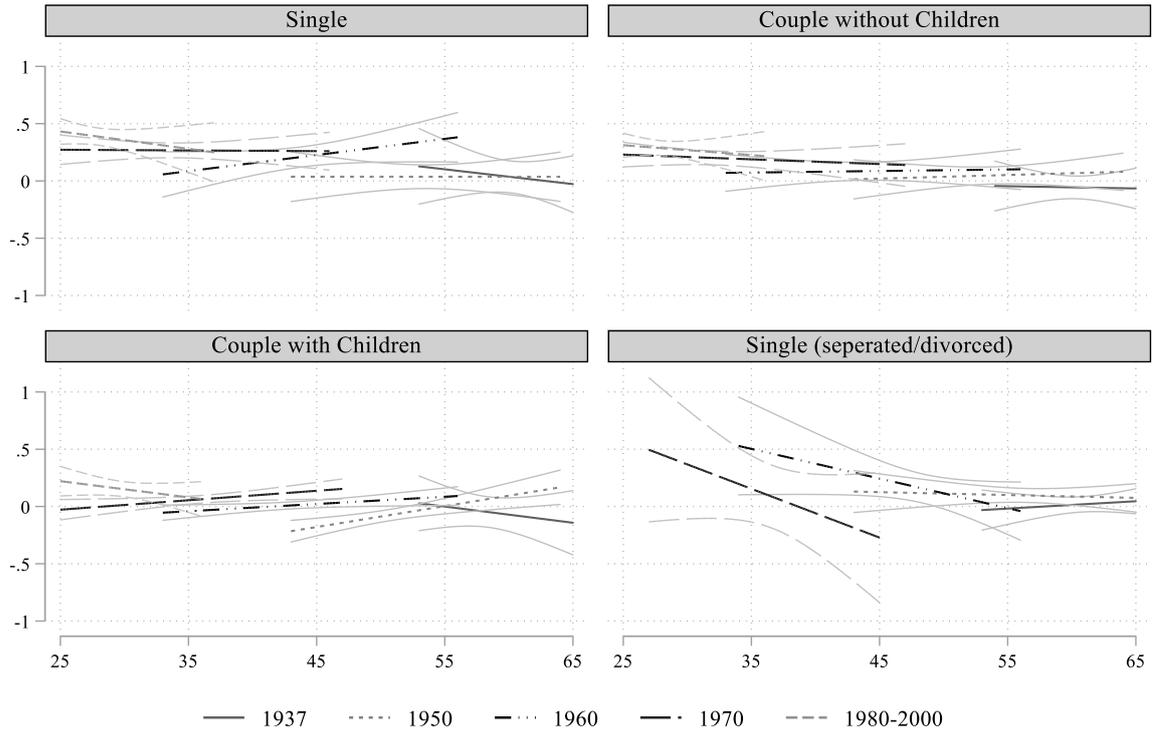


Figure 3-4 Openness to Change of Females (Above) and Males (Below) by Cohort and Household



3.5.3 Occupations and Personal Values

In this section we examine whether work logics are associated with personal values. In these figures the x axis refer to birthyear and the means are computed over all ages due to the low number of respondents in each social class. Figures 3-6 and 3-7 show the predicted value orientations of high and low skilled women and men respectively, in four work logics across birthyear. Comparing the top and bottom graphs in each Figure, it is clear that lower classes value conservation more than the higher classes, however higher and lower classes seem similar in their openness to change vlaues. Kohn and colleagues established this relationship in industrial USA and communist Poland (1989; Kohn and Slomczynski 1990). It seems this relationship has survived the post-industrial occupational and economic changes.

Literature on job values found differences between managers and professionals (Mortimer 1975). This association is also present in contemporary Netherlands. As expected, self-enhancement values display a rank ordering by work logics across cohorts (H8). Employers are generally most self-enhancement oriented, followed by the managers which are closely shadowed by the technical professionals. The socio-cultural professionals rate self-enhancement below other work logics. Hypothesis 9 is partly supported. Men in high skilled interpersonal work (Socio-Cultural Professionals) are more self-transcendence oriented than men in other work logics.

Overall these associations are stronger in younger cohorts than older cohorts and stronger for men than women. The difference in cohorts could be due to several processes. First, psychosocial development may cause a converge of values in the later life-course. Second, differences between occupations may have strengthened as the service sector expanded and automation and information technology changed the content of jobs. Gender differences are unlikely to be driven by the differences in working hours between men and women. Including only full-time or only-part time working women made little difference to the results.

Figure 3-5 Values of Females by Cohort and High (top) and Low (bottom) Skilled Oesch Class

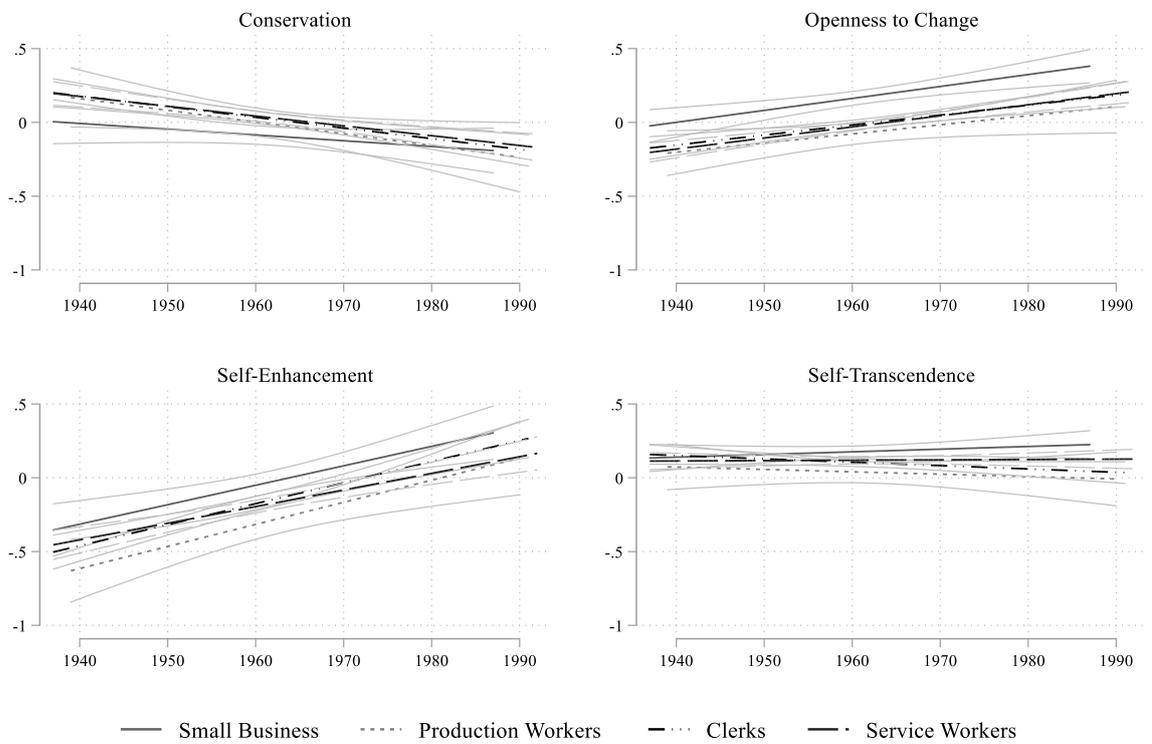
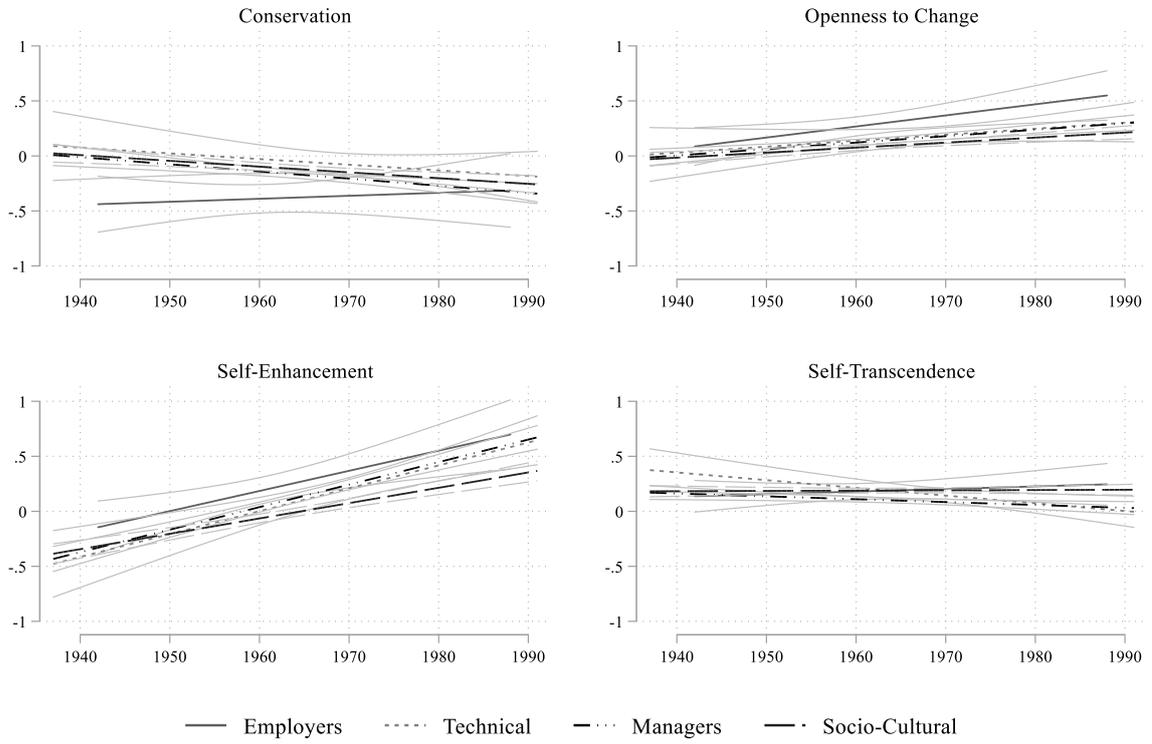
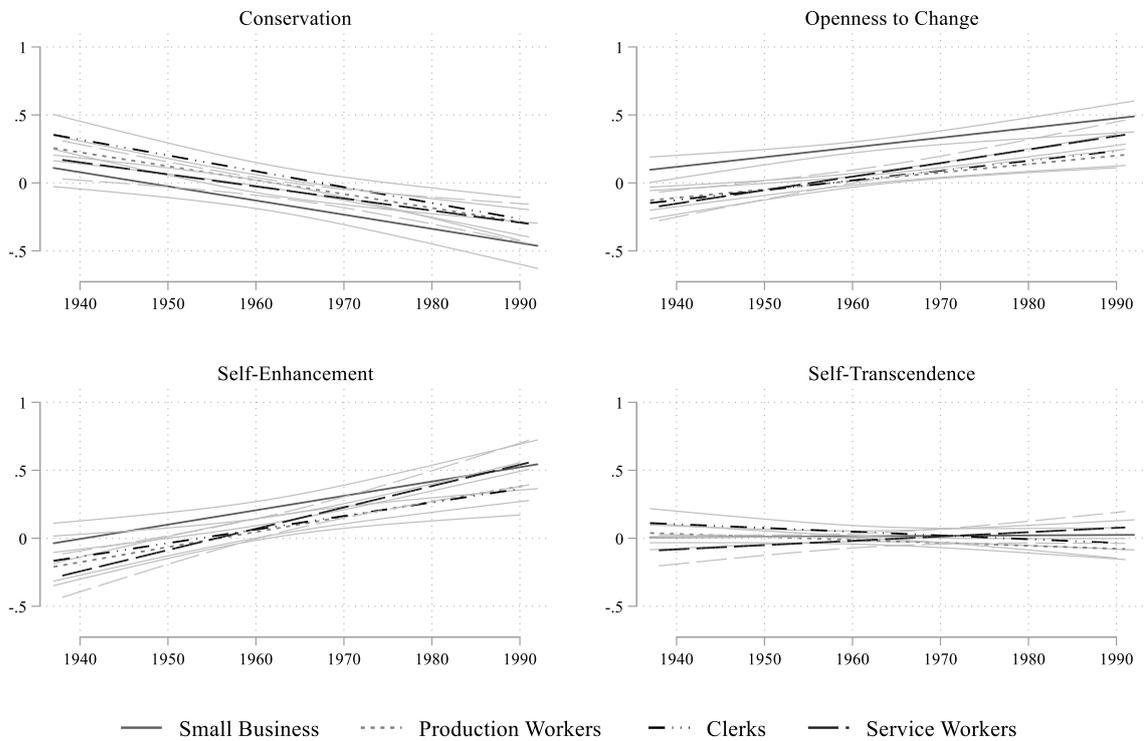
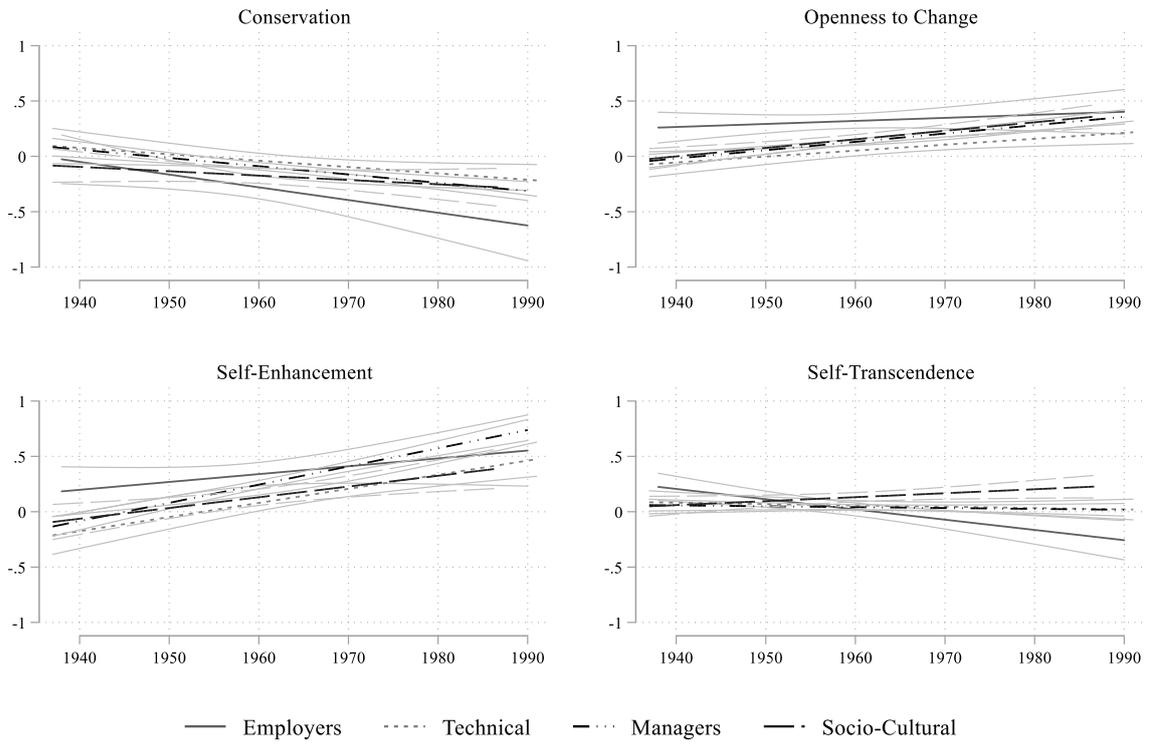


Figure 3-6 Values of Males by Cohort and High (top) and Low (bottom) Skilled Oesch Class



3.6 Discussion

Previous research found that values are shaped by cohort, social structural position and related to family formation. This research was predominantly conducted in the 1950s to 1970s. Significant cultural, social and economic changes have transformed most countries after these decades. These changes were described for the Netherlands in relation to the labor market and family formation. These institutional changes may have altered the relationship between occupational positions or households in regards to access to resources and their meanings to individuals (Begall 2013; Hendrickx et al. 2001; Liefbroer and Dykstra 2000; Oesch 2006). This chapter sought to establish whether associations between personal values, cohorts, social class and the household are also present in post-industrial Netherlands.

In the forgoing plots, comparisons were made between cohorts within a certain age range. From these comparisons cohort and age differences were extrapolated. However, it must be stressed that cohort and age effects cannot be neatly separated. For example, it is impossible to distinguish cohort and ageing effects when these counteract or reinforce each other. However, we can interpret these graphs considering previous research on value development over the life-course and the cohort contexts. Additionally, the method left period effects unaddressed. These can be impactful, for example, the economic crises in 2008 raised the importance of conservation values of young people (Sortheix et al. 2019). It is therefore unwise to make any remarks on the nature of the associations found here, that is, whether they are solely due to cohort or ageing. Nevertheless, the figures establish some associations between variables of interest.

The results indicate that there are changes in values across cohorts. Men and women find conservation less important in younger cohorts, as Inglehart (1990) has previously found. Openness of change is more valued in younger cohorts of women as well. Younger cohorts of women find self-transcendence values more important than older cohorts, while younger cohorts of men find self-enhancement more important than older cohorts. The self-transcendence and self-enhancement trends have not been addressed in sociological literature but point to a divergence in the gender value gap over cohorts (or age), as men value self-enhancement more than women while women find self-transcendence more important than men, on average (Milfont et al. 2016; Schwartz and Rubel 2005; Schwartz and Rubel-Lifschitz 2009).

There are also differences across age within cohorts. There is a decrease in self-enhancement values and increase in self-transcendence values. These trends corroborate the psychological theories of ageing and psycho-social development. That is, individuals turn from self-focused values in early life towards social values in later life.

The SDT narrative claims that more conservative individuals are more likely to get married and follow a normative life-course while openness to change values are associated with a greater likelihood of alternative life-course choices such as divorce. (Lesthaeghe 2010; Van de Kaa 1987). Overall, there was little evidence of these associations. First, there were no major differences between households in conservation and openness to change values. Although, openness to change values were associated with divorced men and women, the confidence intervals were too large to make any conclusions. The lack of any clear differences may be attributable to the fact that divorce, and separation occurred long ago in the cohorts which had substantive proportions of these categories. The effects of these events may be overshadowed by the accumulation of other experiences. Additionally, the meaning of being single, married or a parent at different ages has changed substantively across cohorts. Therefore, the effect of household states and transitions is likely to vary in magnitude and direction across cohorts.

Lastly differences between occupations mostly reinforced previous findings (Kohn 1959; Mortimer et al. 1986). That is, men and women from lower classes were more conservation oriented and less open to change. Differences in work logic showed that the interpersonal and the organizational work logics are associated with self-enhancement and self-transcendence values, as we would expect according to the type of relationships required in these occupations.

Differences between genders, ages, cohorts, social classes, and personal values were in general larger in the youngest respondents. Additionally, changes across cohorts were considerably larger for women than for men. This suggests that personal values are more strongly related to choices and context in early life than in later life and second that personal development and life-trajectories place similar constraints on individuals which homogenizes the population in later life.

3.7 Conclusion

In this chapter evidence for associations between gender, cohort, age and social class were established in a new context, the Netherlands, a post-industrial conservative welfare state. Associations between family and personal values were not evident. In the following chapters these associations will be addressed with longitudinal data. In Chapter 5, I will examine whether values are associated with fields of study and whether occupations socialize individuals. In Chapter 6, I will examine whether personal values predict the probability of first marriage and in Chapter 7, whether values of respondents and their partner impact the division of household labor.

Chapter 4 Exploration and Validation of the Rokeach Value Survey in the Longitudinal Internet Studies for Social sciences

In this dissertation, personal values and their relationship to other variables are analyzed using the theory of basic human values. From this theory several measurement instruments developed, for example the Portrait Value Questionnaire found in the European Social Survey and used in Chapter 3. The following chapters use the Longitudinal Internet Studies for Social sciences (LISS). The LISS data includes an older value survey: the Rokeach Value Survey. Although research on the factor structure of the RVS exists, it has failed to reach a consensus (Braithwaite 1994; Munson and Posner 1980; Thompson, Levitov, and Miederhoff 1982). Therefore, to assess the comparability of these value surveys, this Chapter develops measurements of personal values as defined by the theory of basic human values using items from the Rokeach Value Survey (RVS).

4.1 Values and Value Measures

The study of human values has seen a long list of value instruments and definitions from different disciplines, including sociology, psychology and anthropology (Allport, Vernon, and Lindzey 1960; Braithwaite and Scott 1991; Kluckhohn and Strodtbeck 1973; Rokeach 1973; Schwartz 1992). Often these studies addressed specific value orientations, such as the authoritarian personality (Adorno, Fenkel-Brunswik, and Levison 1950), or targeted specific aspects of life, such as occupational choices (Rosenberg 1957). There were also attempts to create universal value theories such as the Kluckhohn and Strodtbeck (1973) and the Allport et al. (1960) studies. These early studies used a wide variety of conceptualizations and measure of values, sometimes confusing them with preferences, attitudes or personality traits. The main obstacle of value research was a generally agreed on definition of values which was able to separate the concept from attitudes and norms. Rokeach (1973:5) proposed a definition of values discussed in Chapter 2.

Like Kluckhohn and Strodtbeck (1973), Rokeach argued values are cognitive representations of needs, of the desirable; not the desired. What is desired are simply preferences for specific actions and objects while the desirable is general and abstract. Furthermore, these authors argued, if values are representations of needs and all human beings have similar needs, then there should be a relatively small set of human values. However, unlike previous research

Rokeach also included goals along with modes of conduct in his definition of values, if those goals were not situational or object specific.

From this definition Rokeach compiled a list of values from several sources and created a survey which was presented in the 1973 book "The Nature of Human Values". This list was thinned out by applying criteria listed above as properties of values and other criteria to weed out equivalent items. Additionally, Rokeach tried to avoid any items and wordings that may introduce social desirability bias. Thirty-six items were left in total, 18 terminal (desirable end states) and 18 instrumental (desirable modes of conduct) values, which participants rank order separately.

The creation of the RVS and the ranking procedure drew several criticisms. As described, the compilation was rather arbitrary, some questioned whether these were a comprehensive or representative set of all or even the most important values. Furthermore, the rank ordering creates ipsative data, which makes the data unsound for any analysis using matrices (regression, factor analysis). Additionally, ranking forces participants to make choices but it is unclear how participants approach the task, for example, what is their strategy for ties? (for a review of criticisms see Braithwaite and Law 1985). Lastly, using single items instead of indexes limits the generalizability of findings as participants may differ in their interpretation of items (Gibbins and Walker 1993). The item "freedom", for instance, can be interpreted as the desirability of an egalitarian society or individual autonomy. Nevertheless, Rokeach and colleagues were able to show that the RVS distinguished between many types of attitudes, behaviors and social positions, such as occupational choices, political attitudes and behavior, choice of friends, race, age and social class (Rokeach 1973, 1979). However even this long list of significant correlations was found lacking; the flood of correlates lacked a systematic explanation, leading to "ad hoc reinterpretations" (Schuman 1975:580).

Having consolidated and defined the boundaries of the field of value research, Rokeach retired and later passed away in 1988, leaving others to expound a theoretical framework to make sense of the tangle of correlations. Shalom Schwartz stepped up to the task. Building on previous work, he further developed the idea that values are based on needs by specifying three requirements of human existence that must be represented cognitively for survival and well-being (Schwartz 1994; Schwartz and Bilsky 1987, 1990). These include the "needs of individuals as biological organisms, requisites of coordinated social interaction, and survival and welfare

needs of groups” (Schwartz 1992:4). Furthermore, Schwartz and Bilsky (1987) argued against distinguishing values as end states (terminal) and means (instrumental), as these are not clearly distinguishable; some end states can become means and vice versa. Instead they argued that goals and underlying needs are important for distinguishing values.

Utilizing the needs and goals framework, Schwartz used smallest space analysis on the RVS to distinguish seven value factors (Schwartz 1992). The specification of needs in combination with the analysis of the RVS items led to the definition of 10 value types (see Table 4.1). Using these inputs, he supplemented and modified the RVS to create the Schwartz Value Survey (Schwartz 1992) and later the Portrait Value Questionnaire (Schwartz et al. 2001). The resulting value dimensions, including their goals and their content, appear earlier in the values literature (Bales and Couch 1969; Johnston 1995; Lorr et al. 1973). However, Schwartz integrated these with a large body of psychological literature and demonstrated they have a cross-culturally valid correlation structure (Schwartz 1992, 1994). In particular, he showed value orientations create a circumplex structure when their correlations are plotted. Each value is either positively or negatively associated with any other value. Each value shares, to varying degrees, underlying needs and goals while others are incompatible. This reflects the complexity of human life. Humans are continually pulled between intra-personal and interpersonal needs and between approach and avoidance goals. This framework set the stage for analyzing the many correlates of values in a systematic manner.

4.2 Research Design

The aim of this chapter is to use items from the Rokeach Value Survey to construct and validate value measures which fit into the Schwartz theory of values. To fulfill this aim, the RVS is subjected to multidimensional scaling (MDS). This technique summarizes the correlation structure of data on a two-dimensional plot which visualizes the relationships between a large set of items. Multidimensional scaling is chosen over exploratory factor analysis because of the computational difficulties which arise when factor analyzing ipsative data (Chan 2003). To shed additional light on the structure of values in the Netherlands, the MDS of the RVS is compared to that of the Portrait Value Questionnaire (PVQ) in the European Social Survey and the World Value Survey. Then several items are chosen from the RVS as indicators of personal values based on theoretical guidance and statistical properties observed in the MDS plots. A multigroup confirmatory factor analysis will confirm the items as coherent scales. Four

factors, achievement, benevolence, conservation, and openness to change are created. Correlations between these and other value measurements found in the LISS data provide evidence of convergent validity. The four factors are correlated with parenting values found in the European Values Survey and World Value Survey (WVS), with job values from the International Social Survey Programme, and the personal values from the WVS, all of which were fielded to the LISS panel by the CentRedata Institute (Tilburg University, The Netherlands).

4.3 Methods

4.3.1 Multidimensional Scaling

Multidimensional scaling is a data reduction technique: it summarizes the structure of data into fewer dimensions. MDS takes a matrix of similarity or dissimilarity measures as input, in this case correlations, for each pair of r objects (variables) in a data set. These similarities are transformed into distances using an algorithm, depending on the scale of the data. The method aims to reproduce the matrix of similarities by transforming these into distances between objects on an m -dimensional space. Multidimensional scaling does so through minimizing a loss function which is the sum of the squared differences between m -dimensional distances and the r -dimensional space of similarities. When an adequately fitting solution is found these coordinates are plotted. The distance between two points represents their similarity. Plotting the similarities of a large set of objects allows a holistic visual representation of many comparisons. Theory can then be applied to attach meaning to clusters of objects and dimensions.

The quality of an MDS solution can be summarized and examined using several tools. The overall fit of an MDS solution is measured by the Stress-I coefficient, which should be below 0.10 by conventional standards. However, this standard does not consider the number of dimensions and items, which increase the minimum level of stress. Simulations show that the stress of MDS solutions increases with the number of items and dimensions but performs equally well in retrieving the true structure of the data. A modern approach is to evaluate the stress coefficient using a permutation test (Mair, Borg, and Rusch 2016). That is, permutations of the observed data are used to construct a distribution of Stress coefficients. This allows for hypothesis testing whether the observed stress coefficient is significantly different from those obtained from the random permutations. In other words, the permutation test informs us

whether the observed configuration is more informative of the structure of the data than other randomly generated configurations.

There are also other tools available to assess an MDS solution, for example a Shepard diagram plots the observed similarities between items against the distances produced by the MDS solution. A well-fitting MDS solution will replicate the similarities closely, a perfect replication would form a line through the origin. Another tool in the MDS evaluation toolkit is to examine the stress per point, the percentage of stress contributed by a point, which can identify outliers. Two more tools assess the stability of an MDS solution, these are jackknifing and bootstrapping. Jackknifing iteratively excludes one variable from the correlation matrix in an MDS. These solutions can be plotted in overlay. In a stable solution the position of items should not change drastically. The second procedure for assessing stability of an MDS solution is to use bootstrapping. This procedure draws random samples from the observed data to construct 95% confidence intervals around each point.

In values research, similarity measures are correlations between items. Items which share a value, such as security and tradition, should be close together on an MDS plot. Items which reflect opposing values should be on opposite sides of the plot, for example security items and self-direction items. The MDS reported here use a non-metric (ordinal) algorithm to order distances according to a monotonic increasing function. All MDS analysis are conducted in R 3.6.1 using the SMACOF package (Mair et al. 2019).

4.3.2 Multi-group Confirmatory Factor Analysis

When constructing a psychological scale, an investigator must test whether items measure the same concept. This can be statistically shown with confirmatory factor analysis (CFA). It fits a model to data where observed items contribute to a latent factor. If all items have common variance, they are said to measure a latent variable. This analysis requires researchers to know the number of factors and relationship between items and factors. An extension of this analysis is the Multi-Group Confirmatory Factor Analysis (MGCFA). This procedure fits a CFA on each group, often constraining parameters across groups, and provides group and global fit indices. An MGCFA confirms the validity of a measurement instrument and its robustness across groups (e.g. demographic or time points). When an instrument is consistent in measuring a construct, it is said to display measurement invariance. There are three levels of measurement invariance. The first is the configural equivalence, simply whether all items load

onto the same factors across groups. Second is metric equivalence, whether factor loadings are equal across groups. This level allows comparing regression coefficients. Third, scalar equivalence, where also intercepts are equivalent across groups. This level allows comparing means. Scalar equivalence indicates that the items and scales have comparable meaning across groups. Scalar equivalence of the model is established if the model fits well while constraining the factor loadings and intercepts of items to be equal across groups. Acceptable model fit is indicated by an Root Mean Squared Error of Approximation (RMSEA) close to 0.05, a Comparative Fit Index (CFI) close to 0.95 and a Tucker-Lewis Index (TLI) close to 0.95 (Hu and Bentler 1999). The MGCFA were conducted in Stata 15 using the *sem* command.

4.4 Data

4.4.1 Longitudinal Internet Studies for Social sciences

The LISS panel is a representative sample of Dutch individuals who participate in monthly Internet surveys (Scherpenzeel and Das 2010). The panel is based on a true probability sample of households drawn from the population register. Households that could not otherwise participate are provided with a computer and Internet connection. Survey modules are fielded in the panel throughout year, covering a large variety of domains including work, education, income, housing, time use, political views, and personality. A household questionnaire is administered every month, providing monthly information on household status and socio-demographics.

In the years 2008-2018, the personality questionnaire, which includes the RVS, was fielded in March, however, in 2014 and 2015 it was fielded in November. In 2016 there was no funding for the personality questionnaire and was not fielded. Additionally, in waves 2010, 2015 and 2018 only 15% of the respondents were given the long-form questionnaire which includes the RVS.

The sample used for the MDS analysis comes from the 2008 wave. Out of the 7,013 respondents, 245 did not answer the RVS questionnaire, while one more respondent filled out the first but not the second half of the questionnaire. The final sample using pairwise deletion includes either 6,768 or 6,767 observations.

4.4.2 European Social Survey

The European Social Survey (European Social Survey Cumulative File 2016) is a biannual (2002-2016) cross-sectional population survey of all persons over 15 years of age who are resident within private households of participating countries, a core module of which is the PVQ. Value orientations were computed using the PVQ by averaging items as prescribed by Schwartz (2003). Wave 4 of the ESS (2008) is utilized here as an independent data set to validate the structure of values in the Netherlands and includes 1778 respondents. Of these, between 48-51 respondents have missing data on one value measure. A correlation matrix of the PVQ values, used as input for MDS analysis, is based on a sample of 1726-1730 respondents using pairwise deletion.

4.4.3 International Social Survey Programme

The International Social Survey Program (ISSP Research Group 2017) is a cross-national collaboration program for social sciences. The ISSP 2015 was fielded by CentERdata Institute as part of the LISS panel in October 2016. CentERdata randomly sampled 1507 individuals, with a non-response rate of 18.4%. The sample includes 1230 respondents of which 1191 to 1205 answered the job value items. This number is further reduced to 962-979 respondents who also filled in the RVS and are available for correlation using pairwise deletion. Additionally, in 2016 the RVS was not fielded, thus the responses to RVS are from the 2017 LISS wave.

4.4.4 World Value Survey

The World Values Survey (WVS) (Inglehart et al. 2014) tracks values and their impact on social and political life. It includes a list of child qualities, which measure parenting values. In 2012, the CentERdata Institute fielded the WVS in the LISS panel by randomly sampling 2479 respondents, 23.3% of which did not respond. Of the 1901 respondents 322 answered both the parenting values and RVS in that year. LISS respondents are not all asked to respond to the same modules.

4.4.5 European Value Survey

The European Value Survey (EVS 2010), like the WVS, is a cross-sectional and cross-national survey aimed at establishing trends in values and attitudes and their relationship to social and political life. The EVS aims to provide nationally representative data of each country for any person older than 18 who are resident within private households. The data used here are from

the 2008 wave and were fielded to the LISS panel. A total of 5000 LISS panel members were randomly selected, of these 3325 individuals filled out the EVS. Respondents who filled out both the RVS and the EVS are 495 in number.

4.5 Measurement Instruments

4.5.1 The Rokeach Value Survey

LISS panel respondents are asked to rate “Which values act as a guiding principle in your life and which values are less important to you?” on a scale of 1 – extremely unimportant to 7 – extremely important. The RVS items are sincere and truthful, responsible, hardworking, forgiving, open-minded, courageous, helpful, loving, capable, clean, self-controlled, independent, happy, polite, intellectual, obedient, logical and creative. The terminal items include a world at peace, family security, freedom, equality, self-respect, happiness, wisdom, national security, salvation, true friendship, a sense of accomplishment, inner harmony, a comfortable life, mature love, a world of beauty, pleasure, social recognition and an exciting life.

4.5.2 The Portrait Value Questionnaire

Two versions of the PVQ are utilized here, the PVQ in the ESS has 21 items, while the PVQ in the WVS has 11 items. Both present respondents with portraits of an individual and asks them to rate, on a scale from 1 to 6 how alike they are to that person. For instance, respondents are prompted with “Thinking up new ideas and being creative is important to her. She likes to do things her own original way” and indicate “How much like you is this person” by the responses “very much like me” to “not like me at all”. The personal pronouns are matched to the gender of the respondent. The items and their respective value orientations are summarized in table 4-1 for the PVQ21 (ESS) and in table 4-2 for the PVQ11 (WVS).

Table 4-1 Value Items of the PVQ21 in the ESS taken from (Schwartz 2003:311:314)

BENEVOLENCE

12. It's very important to him to help the people around him. He wants to care for other people.

18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.

UNIVERSALISM

3. He thinks it is important that every person in the world be treated equally. He wants justice for everybody, even for people he doesn't know.

8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.

19. He strongly believes that people should care for nature. Looking after the environment is important to him.

SELF-DIRECTION

1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.

11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.

STIMULATION

6. He likes surprises and is always looking for new things to do. He thinks it is important to do lots of different things in life.

15. He looks for adventures and likes to take risks. He wants to have an exciting life.

HEDONISM

10. Having a good time is important to him. He likes to "spoil" himself.

21. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.

ACHIEVEMENT

4. It is very important to him to show his abilities. He wants people to admire what he does.

13. Being very successful is important to him. He likes to impress other people.

POWER

2. It is important to him to be rich. He wants to have a lot of money and expensive things.

17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.

SECURITY

5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.

14. It is very important to him that his country be safe from threats from within and without. He is concerned that social order be protected.

CONFORMITY

7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.

16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.

TRADITION

9. He thinks it's important not to ask for more than what you have. He believes that people should be satisfied with what they have.

20. Religious belief is important to him. He tries hard to do what his religion requires.

Table 4-2 Value Items of the PVQ10 in the WVS (Marchand 2013)

Value	Item wording
Self-direction	It is important to this person to think up new ideas and be creative; to do things one's own way.
Power	It is important to this person to be rich; to have a lot of money and expensive things.
Security	Living in secure surroundings is important to this person; to avoid anything that might be dangerous.
Hedonism	It is important to this person to have a good time; to "spoil" oneself.
Universalism (social)	It is important to this person to do something for the good of society.
Benevolence	It is important for this person to help the people nearby; to care for their well-being.
Achievement	Being very successful is important to this person; to have people recognize one's achievements
Stimulation	Adventure and taking risks are important to this person; to have an exciting life.
Conformity	It is important to this person to always behave properly; to avoid doing anything people would say is wrong.
Universalism (environmental)	Looking after the environment is important to this person; to care for nature and save life resources.
Tradition	Tradition is important to this person; to follow the customs handed down by one's religion or family.

4.5.3 Parenting Values

The WVS and the EVS asked respondents about their parenting values. The questionnaire is based on Kohn's (1959) study, who examined differences in parenting values between social classes. In the WVS, respondents are presented a prompt "Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five." The chosen qualities are not ranked but coded 1 if chosen and 0 if not chosen. The child qualities included in the World Value Survey are independence,

hard work, feeling responsible, imagination, tolerance, thrift, determination, religious faith, unselfishness, obedience, and self-expression.

A similar questionnaire on desirable child qualities is included in the European Value Survey in 2008. The prompt is: “Here is a list of qualities which children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five!”. The answers are coded as 1 (Yes) and 0 (No). The EVS and WVS items are similar, except that the EVS includes “Good Manners” instead of “Self-Expression”. Additionally, the WVS and EVS also include an option “I don’t know”, which is excluded from the analysis.

4.5.4 Job Values

Job values were measured in the 2016 wave of the LISS panel, as commissioned by the ISSP. Respondents were asked to rate on a scale of 1 – not important at all to 5 - very important, “how important to you personally this is in a job”: job security, high income, good opportunities for advancement, an interesting job, a job that allows someone to work independently, a job that allows someone to help other people, a job that is useful to society, a job that allows someone to decide their times or days of work, a job that involves personal contact with other people.

Following the job values literature (Mortimer et al. 1986), I factor analyzed these items using iterated principle factors and orthogonal varimax rotation. A three-factor solution emerged which corresponded to the intrinsic, extrinsic and altruistic job values, each with eigen values greater than 1 and substantive factor loadings for each item. The first factor (altruistic) includes the items: help other people, useful to society, personal contact with other people. Factor 2 (extrinsic) includes: job security, high income, good opportunities for advancement. Lastly, factor 3 (intrinsic) includes: an interesting job and work independently.

4.6 Results

4.6.1 Seven Factors Solution

In his initial search for a comprehensive set of value items, Schwartz (1992) divided the RVS into seven factors, shown in table 4-3 below. These factors, however, did not show a satisfactory fit when subjected to a MGCFA. Save for the restrictive conformity, achievement and enjoyment factors, the CFI was worse than the TLI and below the 0.95 cutoff point (see Table 2), indicating that the factors security, maturity, self-direction, and pro-social, were too broad.

Indeed, these factors required error covariances between items to achieve an acceptable coefficient on global fit measures. However, even with these added error covariances, these factors did not show convergent validity with other value measures. Some factors did not correlate with any of their respective PVQ items or correlated equally with items that spanned across different value orientations. Thus, these factors were either too broad or failed to capture the values as envisioned by the human theory of values. Therefore, the seven were discarded and initiated the search for new factors.

Table 4-3 The 7 Factor Solution of the RVS items by Schwartz 1992

Factor	RVS Items	RMSEA [95% CI]	CFI	TLI
security	national security, world peace, freedom, inner harmony, family security, responsible	0.067 [0.65-0.69]	0.946	0.959
maturity	mature love, courageous, wisdom world of beauty, true friendship	0.065 [0.062-0.67]	0.937	0.955
self-direction	sense of accomplishment, imaginative, independent, broadminded, intellectual, self-respect, logical	0.072 [0.70-0.074]	0.914	0.932
achievement	capable, social recognition, ambitious	0.037 [0.033-0.041]	0.980	0.989
enjoyment	happiness, cheerful, pleasure, comfortable life.	0.050 [0.047-0.053]	0.977	0.985
restrictive conformity	self-controlled, obedient polite, clean	0.062 [0.060-0.065]	0.975	0.984
prosocial	equality, belief in god, helpful, forgiving, honest, loving.	0.063 [0.61-0.65]	0.957	0.967

4.6.2 Multidimensional Scaling of the RVS in the LISS data 2008

According to the theory of basic human values we should observe a circumplex structure differentiating personal from social focused goals and growth from anxiety-based values. Figure

4-6 shows the MDS plot of RVS items in the 2008 wave of the LISS data. Before interpreting the clusters of items, we will examine whether this plot accurately represents the data at hand. The Stress-I coefficient is 0.21, which, by conventional standards ($< .10$), is a poor fit. Given that there are 36 items, this Stress-I coefficient may be acceptable. Indeed, the permutation test reports the average Stress-I coefficient of this data is 0.35. Furthermore, it shows that observing a stress coefficient of 0.21 is statistically significant ($p < .05$), indicating an adequate fit. However, the Shepard plot in Figure 4-1 shows some dispersion in the lower quadrant of the graph, indicating that some items are poorly represented, that is, the strength of their correlations did not translate well into distances and positions in the MDS plot. Examining the stress per point identifies the ill-fitting variables. These show that most items contribute between 1-3% of stress, except for item 125 (salvation) which contributes 13% and the items 114 (obedient), 110 (independent), and 116 (creative) which each contribute circa 6% of the stress. Furthermore, the items 124 (national security), 117 (world peace) 111 (happiness) and 129 (comfortable life) contribute about 4% of stress. Theoretically, these items belong to the conservation versus openness to change dimension.

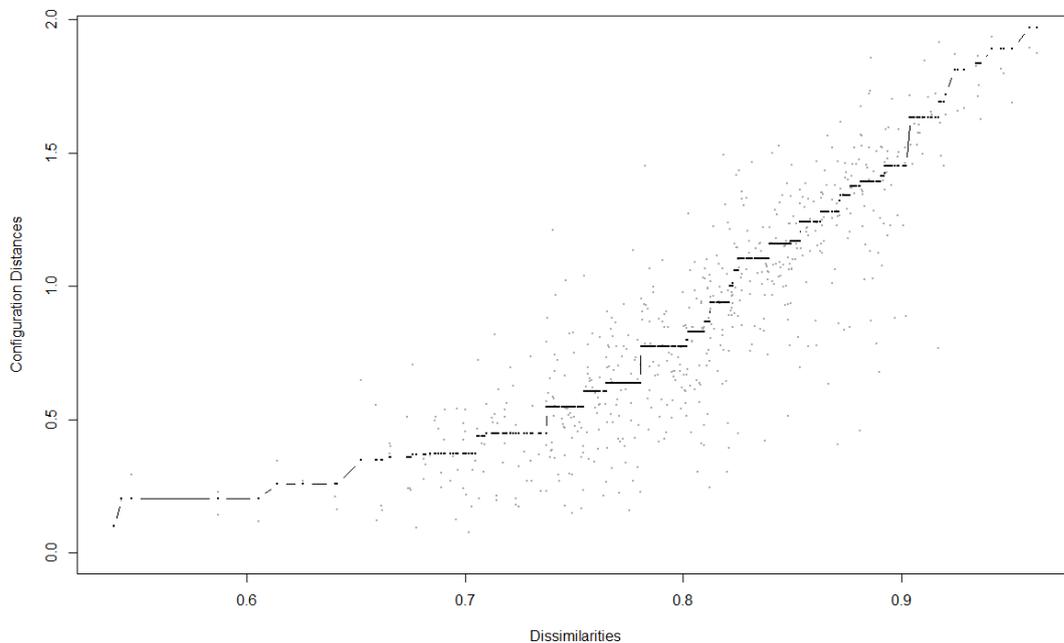


Figure 4-1 Shepard Diagram of the RVS MDS

Similar conclusions can be drawn from examining the stability of the MDS solution. A bootstrapping procedure that constructs 95% confidence intervals around each point and a

jackknife procedure which iteratively excludes one variable both indicate that items belonging to the conservation and openness to change dimension are unstable. Figure 4-2 shows the item “salvation” (cp125) jumps around from the north to south end of the graph in the jackknife procedure. Additionally, Figure 4-3 shows the items independent (cp110), national security (cp124) and a world at peace (cp117) can be located in different clusters, while most other items are stable, indicating the conservation and openness to change items are cause for concern.

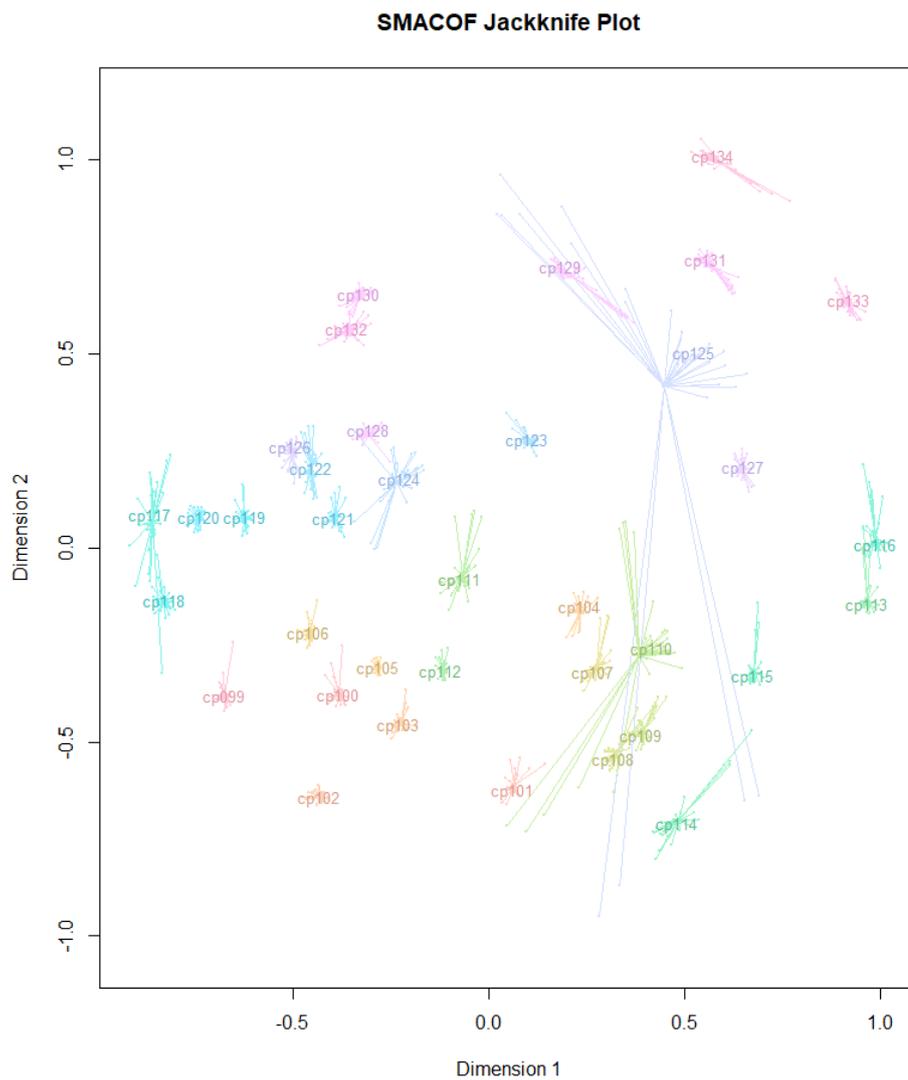


Figure 4-2 Coordinate Plot of the RVS with alternative coordinates from a Jackknife Procedure

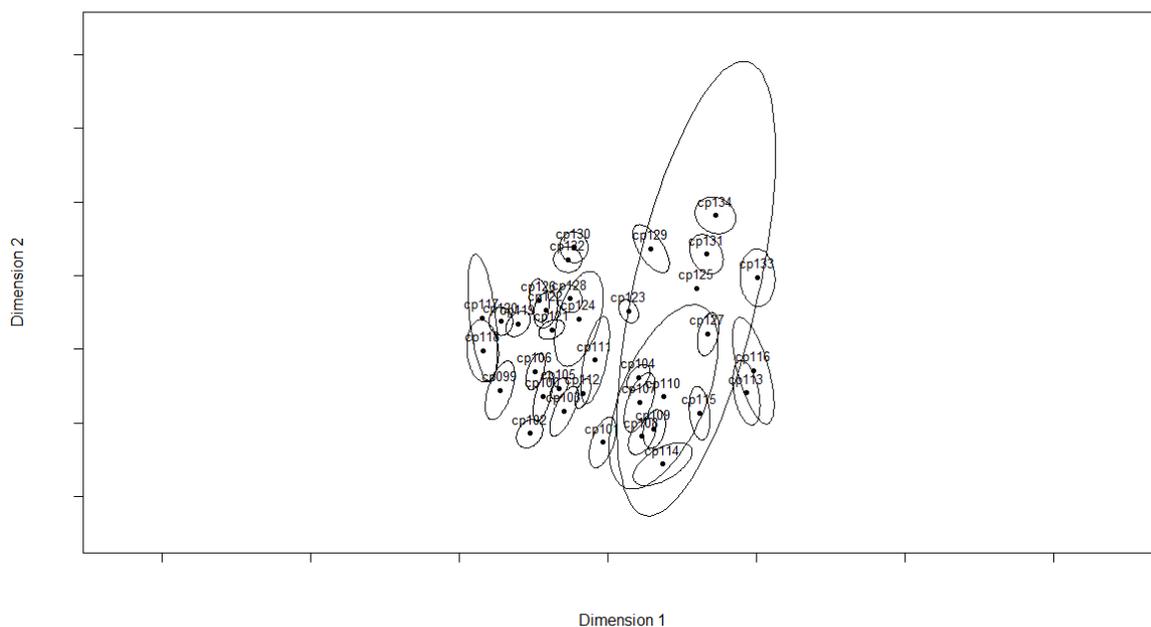


Figure 4-3 Coordinate Plot of the RVS MDS with 95% Confidence Intervals

In the case of a ‘bad’ point, Borg, Mair, and Groenen (2018) recommend moving the point to a theoretically consistent area and assessing whether the increase in stress is acceptable, which then allows for a wholesome interpretation of the plot. Moving the salvation (cp125) item next to its conceptual counterparts (cp114 obedient, cp108 clean, and cp109 self-controlled) increases stress by 0.01, an acceptable increase.

Having moved the salvation item, several regions of the MDS plot in Figure 4-4 can be interpreted using the theory of basic human values. First, the social-focused and personal focused values occupy separate regions of the plot. The right side of the plot consists mostly of personal focused items that correspond to the power, achievement, and stimulation values. Going along the outer edge starting from the top right these include, an exciting life, social recognition, creative, and intellectual. Starting at the bottom most point of the graph, items have a social focus: obedient, forgiving, sincere and truthful, family security and a world of peace.

Several areas of the graph also substantively relate to specific values, as indicated in Figure 4-4. However, the person focused values are ordered differently than expected. Theoretically, the value adjacent to universalism is self-direction, followed by stimulation, achievement, power and then conformity. In this case stimulation is adjacent to universalism followed by

achievement and then comes self-direction, which ends up being adjacent to conservation items. This is rather uncomfortable as the theory of human values prescribes these last two values as opposing in their goals and thus should occupy opposing ends of the plot.

The areas of the plot are not completely coherent. Items on security, such as national and family security, are positioned in the benevolence and universalism areas. Furthermore, the item happiness (cp122) lies in the universalism sector, which is out of order. Happiness is certainly a person focused value. However, this item was translated from the Dutch word “geluk” which has two definitions: luck or the happiness of looking forward to something. It is a word that implies a trust in the world and therefore driven by a growth mindset, that is one of approaching opportunities. The items polite and open-minded are also a cause for concern. At face value these items belong to the conservation and self-direction, respectively, yet they are close to each other and in the benevolence area.

The exploration of structure of the RVS items reaffirms the previous findings from the seven-factor model, that some items show promise, but including all items casts too broad a net, introducing too many interrelated concepts. However, before jumping to the conclusion that the RVS items lack coherence, we examine the structure of the PVQ from the ESS and WVS data to see whether similar anomalies occur.

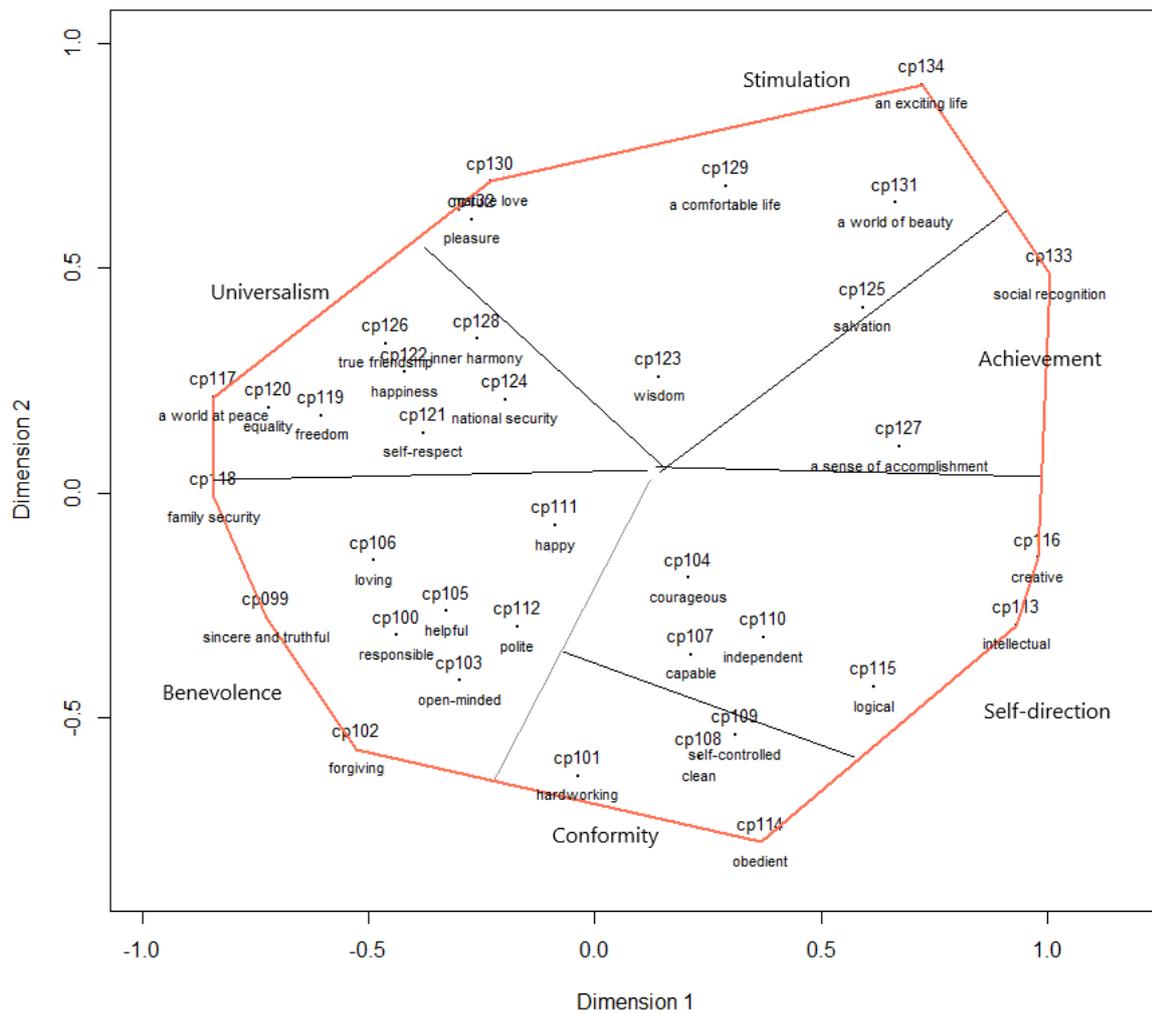


Figure 4-4 MDS Coordinate plot of the RVS items in the 2008 LISS data

4.7 MDS of PVQ data ESS 2008 and WVS 2012

Figure 4-5 and 4-6 below show the MDS solutions from the PVQ found in the ESS and WVS data, respectively. Figure 4-5 shows the structure of the PVQ21 values, which were computed by taking the mean of the relevant value items. In the PVQ10, these values are measured by only one item, except for universalism which has two items. In both figures, the relative positions of values are as expected. The personal focused values cluster together on one side of the plot, divided mainly by dimension 1 on the x-axis, while the growth vs anxiety motivations of values are represented on dimension 2, the y-axis. The values are however, not evenly spaced around the circle. The conservation values (tradition, conformity and security) are somewhat separated from other social-focused values of universalism and benevolence and separated from other anxiety motivated values, such as and power, achievement. Additionally, self-direction lies in a middle ground between the other person-focused values and the social-focused values with which it shares a growth motivation.

The structure observed in the PVQ MDS plot sheds some light on abnormal positioning of items in the RVS MDS plot, the adjacent position of conservation and self-direction items. In the RVS, few items specifically address tradition or security, thus the only social focused items are the benevolence and universalism items. This creates an affinity between conservation items and self-transcendence items as these are the only items which share social-focused goals. However, the self-direction items share their growth-based motivation with benevolence and universalism items. Therefore, both conservation and self-direction items vie for a spot adjacent to the growth motivated and social focused values of benevolence and universalism. However, this configuration introduces stress into the solution as the conservation and self-direction items are not alike. Indeed, we could observe that the most troublesome items in the stress per point, the jackknife and bootstrap procedure belong to the conservation, security, and self-direction values.

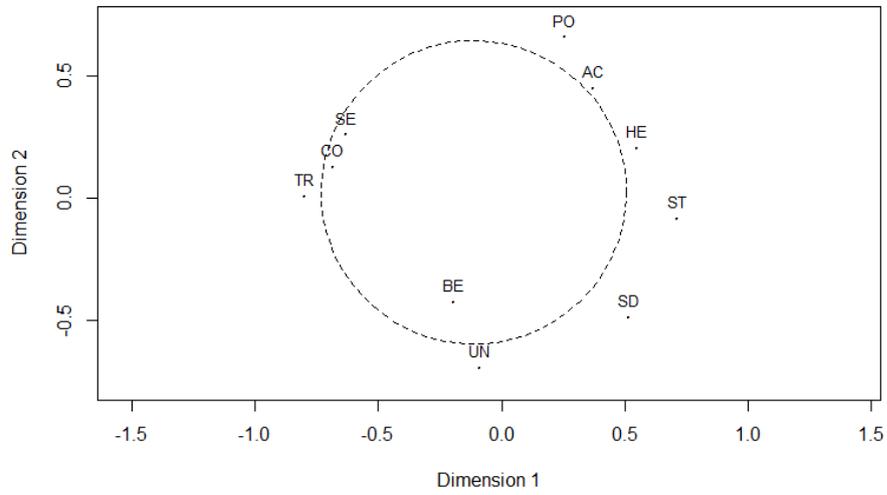


Figure 4-5 Coordinate Plot of PVQ21 MDS (ESS)

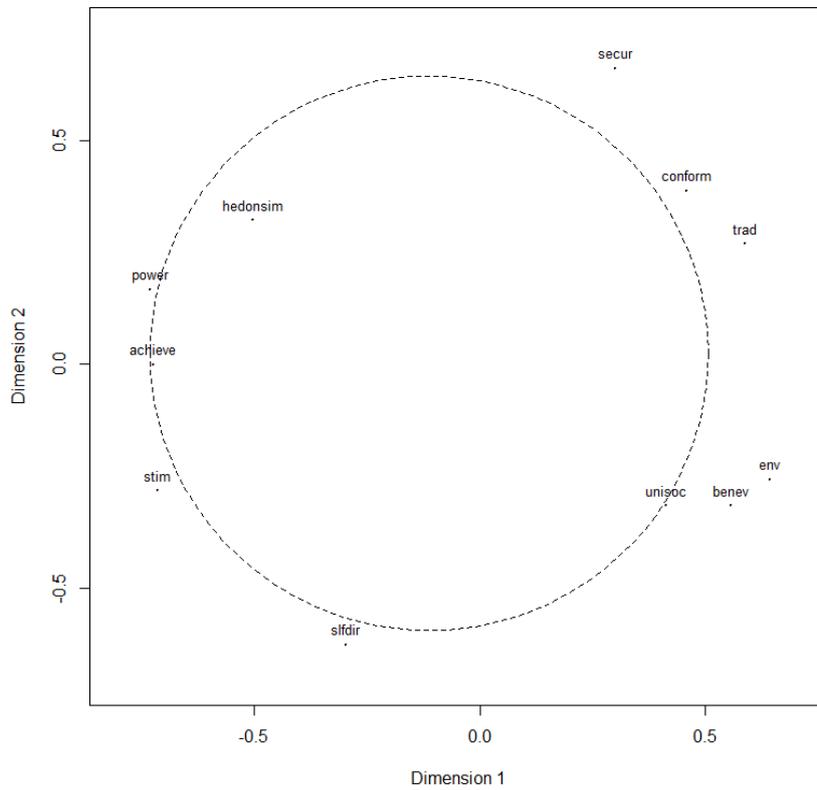


Figure 4-6 Coordinate Plot of the PVQ10 (WVS)

4.8 Selection of Items from the RVS

Having examined the structure of the RVS and the PVQ, the time comes to select items which I hope will make a valid value measurement. Item selection is based on the resemblance to the Schwartz values, their position and stability in the MDS solution. For the benevolence values, the items Sincere and truthful 099, helpful 105, and loving 106 fit the bill. These items express the goal to have close and reciprocal interpersonal relationships, are clustered close together and stable in the MDS solution. Second the items a sense of accomplishment, social recognition map onto achievement values, but a third item is needed for a MGCFA. The item “an exciting life” was chosen for its proximity in the value space both in the MDS and theoretically as an item representing stimulation. The items clean, obedient and self-controlled most resemble the conservation value and are positioned close to each other in the MDS. Lastly, openness to change was measured by open-minded, pleasure and freedom. This dimension is based on their lexical similarity to the self-direction and stimulation values but, as evident from the MDS, do not form a coherent area on the plot. These items were chosen to represent the openness to change orientation due to a lack of better alternatives.

4.9 Confirmatory Factor Analysis

To test the measurement invariance of the proposed value orientations, a multi-group confirmatory factor analysis (MGCFA) was conducted using Stata 15. Each factor was estimated separately using data from each wave as a group. Each factor shows acceptable fit across waves 2008-2018. Achievement is measured with the items “a sense of accomplishment”, “social recognition” and “an exciting life” (RMSEA = 0.046 [0.042- 0.050], CFI = 0.974, TLI = 0.986). Benevolence is measured with items: “helpful”, “loving” and “sincere and truthful” (RMSEA = 0.44 [0.040- 0.048], CFI = 0.989, TLI = 0.994). Conservation is measured using items: “clean”, “obedient”, and “self-controlled” (RMSEA = 0.032 [0.028 -0.036], CFI = 0.995, TLI= 0.997). The openness to change items include “open-minded”, “pleasure” and “freedom” (RMSEA = 0.043 [0.039-0.047] CFI = 0.968, TLI = 0.982).

Table 4-4 Factors from the Rokeach Value Survey

Factor	Items
Benevolence	Sincere and truthful 099, helpful 105, loving 106
Achievement	a sense of accomplishment 127, social recognition 133, exciting life 134.
Conservation	Clean 108, obedient 114, self-controlled 109
Openness to Change	Open-minded 103, Pleasure 132, Freedom 119

4.10 RVS Factors and the Portrait Values Questionnaire

The factors extracted from the RVS may have desirable statistical properties, but their construct validity is in question. The RVS factors are, for this purpose, correlated with items of the Portrait Value Questionnaire (PVQ) from the WVS. Table 4-5 shows correlations between the PVQ10 items and the latent factors from the RVS. The conservation factor performs reasonably well. It is most strongly correlated with the conservation value items from the PVQ, security, conformity and tradition, while negatively related to the opposing openness to change items: self-direction and stimulation. The benevolence factor from the RVS is moderately correlated with the benevolence item from the PVQ10 and has small correlations to adjacent value items such as security, tradition and universalism (social). The openness to change RVS factor does poorly. It is not correlated with self-direction and weakly correlated to stimulation. Additionally, it has stronger correlations with security, hedonism and benevolence. The achievement factor from the RVS is also moderately correlated with its namesake from the PVQ10. Additionally, it is correlated with the adjacent values of power and stimulation. However, it is also correlated to a similar degree to value items opposed to it such as universalism and benevolence, which is undesirable. These correlations may exist due to scale use. That is, the self-transcendence versus self-enhancement values are strongly associated to the individual anchor in the scale, the mean ratings. Thus, individuals who rate achievement values highly compared to the population are also likely to rate benevolence values highly. This association can be taken out through ipsatizing the RVS factors, we turn to this next.

Table 4-6 shows correlations between ipsatized RVS factors and the PVQ10 items. These show similar relationships as in Table 4-5. The correlation between benevolence factors are weaker

when ipsatized but still confirm the theoretical framework. More promising, is the achievement factor which no longer correlates with the benevolence or universalism items from the PVQ. Furthermore, the openness to change RVS factor is correlated with self-direction and negatively correlated to both security and tradition. Overall, the correlations with the PVQ10 show that RVS factors discriminate satisfactorily between different values, apart from the openness to change factor. That is, value items in the PVQ are correlated to the RVS factors as expected from the circumplex structure of values.

Table 4-5 Correlations of the PVQ10 items for RVS Factors

PVQ10 Item	Conservation	Benevolence	Achievement	Openness to change
Self-direction	-0.152*	-0.078	0.008	0.033
power	-0.021	-0.109	0.139*	0.065
security	0.288*	0.169*	0.093	0.115*
hedonism	-0.010	0.026	0.137*	0.168*
Universalism (social)	0.061	0.236*	0.159*	0.084
Benevolence	0.100	0.356*	0.168*	0.162*
Achievement	0.006	-0.095	0.274*	0.058
Stimulation	-0.168*	-0.064	0.190*	0.041
Conformity	0.134*	0.073	-0.014	0.024
Universalism (Environment)	0.138*	0.099	0.100	0.020
Tradition	0.210*	0.131*	0.108	0.059

Note: * significant at $p < .05$, $N = 320$. Correlations in bold are corresponding values measures.

Table 4-6 Correlations between ipsatized RVS factors and PVQ10 items

PVQ10 Item	Conservation	Benevolence	Achievement	Openness to change
Self-direction	-0.194*	0.041	0.066	0.141*
Power	-0.090	-0.188*	0.228*	-0.010
Security	0.280*	-0.115*	-0.059	-0.194*
Hedonism	-0.097	-0.087	0.113*	0.065
Universalism (social)	-0.031	0.075	0.056	-0.126*
Benevolence	-0.040	0.137*	-0.003	-0.090
Achievement	-0.150*	-0.250*	0.395*	-0.119*
Stimulation	-0.302*	-0.085	0.307*	0.059
Conformity	0.167*	-0.041	-0.081	-0.074
Universalism (Environment)	0.124*	-0.032	-0.017	-0.122*
Tradition	0.231*	-0.092	-0.039	-0.183*

Note: * significant at $p < .05$, correlations in bold are corresponding value measures.

4.11 The RVS Factors and Parenting Values

Melvin Kohn investigated the relationship between social class and parenting values (Kohn 1959). The rationale being that parenting values may explain differences in child-rearing practices across social classes. Kohn showed that higher social classes value self-direction and lower classes value obedience from their children. The same relationships with social class was shown with personal values in later work (Kohn 1989). I therefore expect RVS factors to correlate with several qualities that respondents believe are important for their children. Conformity should be associated with thrift, religious faith and obedience. These child qualities show a motive for self-restraint and submit control to others or ideas. Openness to change should be associated with items that seek out stimulation, autonomy and independence. Thus, openness to change is expected to be associated with imagination, tolerance and self-expression.

Achievement motivates individuals to seek success in concordance with social standards, it is likely associated with the child qualities of determination and hard work. Benevolence values aim for close and frequent interpersonal contact and therefore likely to be associated with the child quality unselfishness. Additionally, we can expect value orientations to be negatively related to items which correspond to their opposing orientations (conservation - openness to change, benevolence – achievement)

Figure 4-7 below shows the effect, in odds ratios, of personal values on choosing a child quality. The coefficients are from a logistic regression on the WVS data, controlling for gender. As expected, conservation is associated with choosing thrift, faith and obedience as an important child quality. Furthermore, conservation is negatively associated with choosing imagination, self-expression and independence as important child qualities. Benevolence is not associated with the expected unselfishness value but is associated to choosing faith. Achievement values are not associated with the expected child qualities of hard work and determination. Lastly, the openness to change factor is associated with imagination and negatively associated with choosing obedience.

Figure 4-8 below shows the association between personal values and parenting values from the EVS. As with the WVS, conservation and openness to change are associated with their respective parenting values. Contrary to the WVS, benevolence is associated with unselfishness as expected and the achievement value is also associated with hard work and negatively associated with unselfishness.

In all, the pattern of relationships between value factors and parenting values follows the theory of basic human values. Child qualities that are positively associated with one value orientation are negatively associated with its opposing value orientation. This is most visible with the conservation and openness to change values and their relationship to thrift, obedience, imagination, self-expression, tolerance and independence. The benevolence and achievement factors did not correlate consistently with their respective parenting values. In the WVS data the expected associations between these values and the child qualities of unselfishness, hard work and determination were not significant. In the EVS data, these associations were mostly confirmed. Given the small sample size, the substitution of good manners with self-expression and limited variation in child qualities, it is unsurprising that the significance levels vary

between the surveys. Most individuals chose the same parenting values: responsibility, good manners and tolerance were chosen by 91, 84 and 88% of the EVS sample respectively.

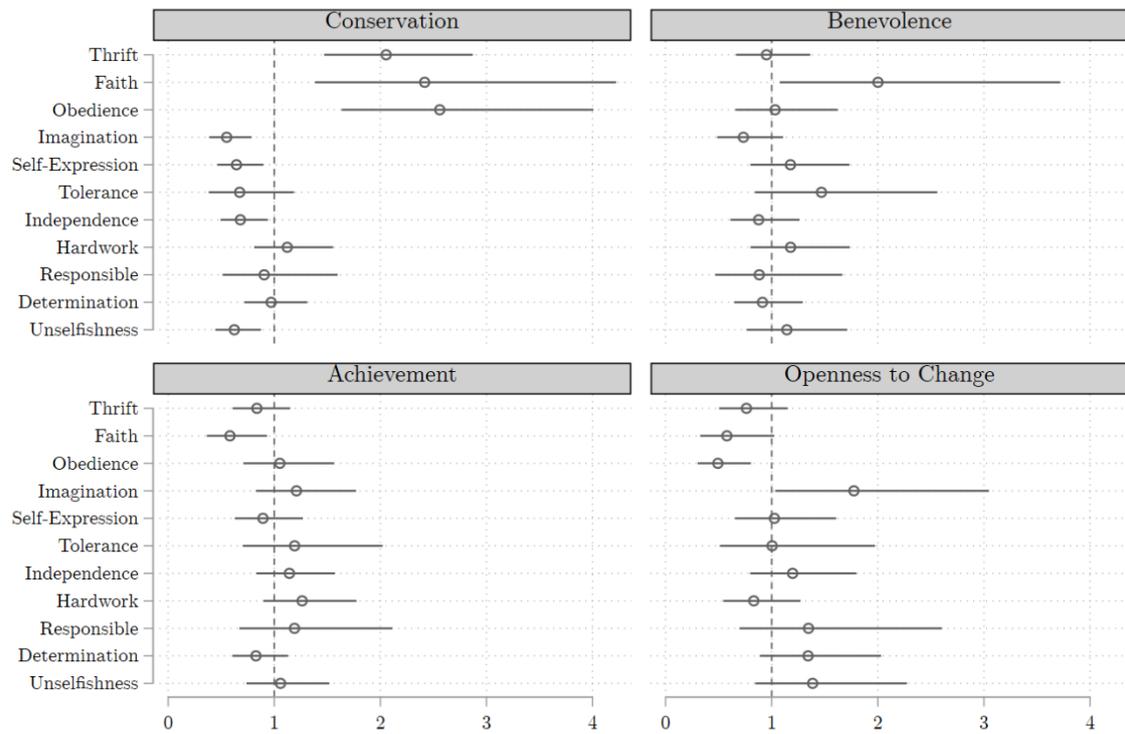


Figure 4-7 Associations in odds ratios between Personal and Parenting Values, WVS

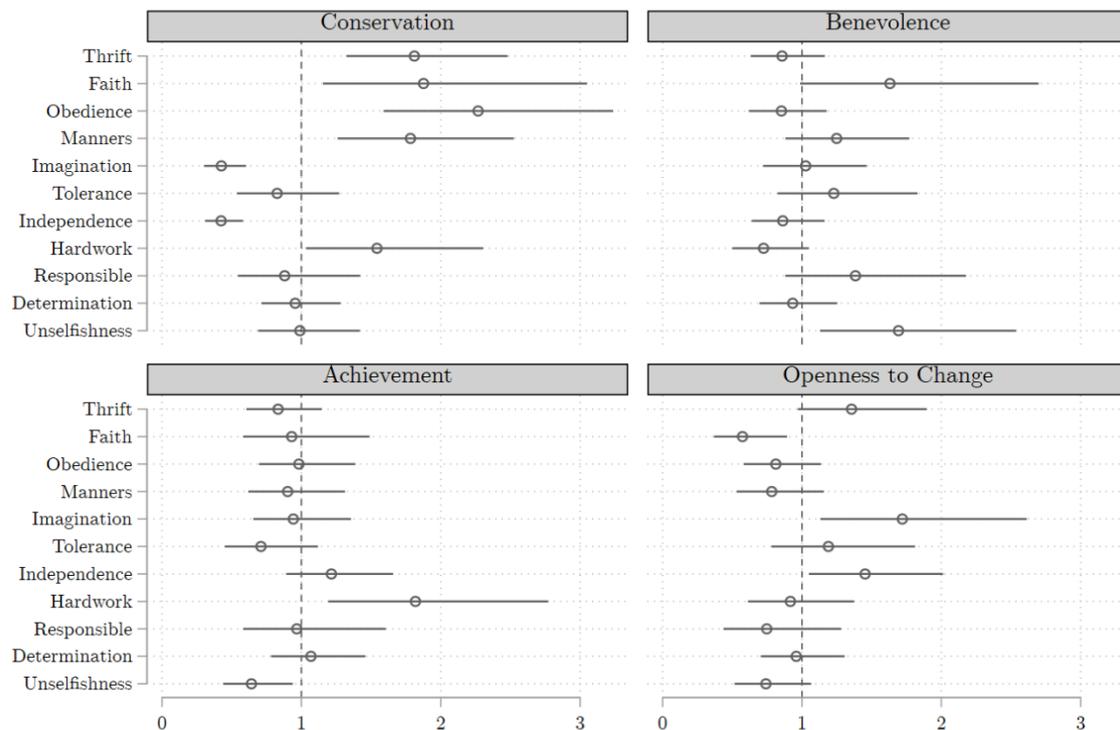


Figure 4-8 Associations in odds ratios between Personal and Parenting Values, EVS

4.12 The RVS Factors and Job Values

Job values were measured in the 2016 wave of the LISS as commissioned by the International Social Survey Program. Table 4-7 shows the correlations between the value factors and job values. As expected, benevolence is most strongly correlated with altruistic values, while achievement is correlated with extrinsic job values. Conservation is most strongly positively correlated to extrinsic job values and weakly positively correlated to altruistic values and negatively correlated to intrinsic values. Surprisingly, openness to change is associated with altruistic values rather than intrinsic job values.

Table 4-7 Correlations between Job Values and the RVS Factors (ISSP)

Job values	Conservation	Benevolence	Achievement	Openness to change
altruistic	0.098*	0.312*	0.080*	0.186*
extrinsic	0.178*	0.030	0.244*	0.085*
intrinsic	-0.089*	-0.018	0.004	0.035

4.13 Conclusions

In this Chapter I examined whether value orientations as described by the theory of basic human values could be recovered from the RVS in the LISS data. The seven-factor solution proposed by Schwartz (1992) was first tested but displayed measurement variance across waves using a MGCFA. The seven factor scores also did not relate to the relevant PVQ items. Therefore, the seven-factor model was discarded.

Multidimensional scaling showed the RVS could be divided into sections which correspond to basic human values. However, several items did not fit well. These correspond to the openness to change and conservation dimension. Comparing the RVS to the PVQ (ESS) MDS plots brought to light a plausible explanation. The coordinates of the PVQ showed conservation values form a separate region which is not close to the other social focused values (benevolence and universalism). Additionally, the benevolence and universalism values were close to the personal focused values. Given that few items in the RVS measure tradition or security, the remaining social conformity items are difficult to integrate into the constellation. Particularly, the item salvation did not fit well. This may be because the Netherlands is a majority non-denominational country which could lead to multiple interpretations of the word (Hart 2014). Alternatively, religion values may require a dimension of their own (Borg et al. 2019). Moving the salvation item led to a small increase in stress but allowed dividing the MDS into areas which substantively related to value orientations.

Items from each area were selected based on their stability in the MDS solution and their resemblance to the content of the basic human values. The benevolence and conservation items capture the intended construct well. At face value the openness to change items did too, but as the RVS presents words without context, respondents may have interpreted the words open-minded and freedom in a social instead of individual sense. The achievement items also include an item that measures stimulation (exciting life), which is an openness to change value. These items showed measurement invariance across all waves of the LISS data in a MGCFA. Having established satisfactory statistical properties of these scales, they were correlated with other value measures to establish their content validity.

The correlations with the PVQ10 show that the RVS factors are correlated with the expected items. That is, PVQ items closest to the RVS factors are positively related to them and, in some cases such as conservation, also negatively correlated with opposing PVQ items. However,

the openness to change RVS factor did rather poorly. This was expected as the MDS projections showed these items to be scattered. The openness to change factor correlated with security, hedonism, and benevolence PVQ items. However, ipsatizing factors did show strong correlations with the expected PVQ10 items for all factors.

The conservation and achievement values are clearly distinguished from others in their relationship to parenting values and the child qualities questionnaires from the WVS and EVS. Conservation was associated with parents endorsing restrictive qualities such as obedience, manners, and thrift while they were less likely to endorse risk-seeking and stimulating behavior such as imagination and self-expression. Achievement was associated with parents choosing hard work and negatively related to choosing unselfishness, which corresponds to the desire for social status and power.

The job values from the ISSP also showed that conservation, benevolence, and achievement were correlated with the expected dimensions. Benevolence is associated with the importance of helping others on the job. Achievement is associated with the importance of high income, and good opportunities for advancement. Lastly, conservation is related to extrinsic values, most likely because it includes the item job security. As with the PVQ10, the openness to change factor did not correlate with the expected job values. Openness to change is the least consistent value in its convergent validity. The factor was not associated with the relevant items from the PVQ10, child qualities, or job values. It's only saving grace is that the ipsatized scores did show strong correlations to the relevant PVQ items.

Chapter 5 Stratification and Values: Two sides of the same coin.

An individual's occupation is central to daily experience and as a position in society. As a result, experiences at the workplace and job rewards have an impact on personality, including cognitive, behavioral, and emotional patterns (Kohn 1959; Kohn and Slomczynski 1990; Mortimer et al. 1986). Among the building blocks of personality are personal values. Two sociological literatures address the relationship between occupations and values. The first examines differences in values between social classes, particularly focusing on job complexity, spearheaded by Melvin Kohn. The second literature builds on Kohn's work but integrated a life course perspective and psychological theories of personal development. This research program spearheaded by Jeylan Mortimer examines differences in values between occupations and across the life course. Both research programs find occupations are associated with values through a process of selection and reinforcement. However, differences in measures of values, occupational tasks, and conceptualizations of stratification make their results difficult to compare.

Early in the 20th century, Melvin Kohn showed social class and job complexity are associated with self-direction and social conformity values (Kohn 1959; Kohn and Slomczynski 1990). However, job content was not considered, thereby equating widely different occupations and daily experiences, such as those of production workers and service workers. Occupations differ in their typical interaction with clients, co-workers, and supervisors which may also impact personal values. Indeed, job content is related to differences in social mobility, political attitudes, and lifestyle and therefore important for understanding stratification (Güveli, Luijkx, and Ganzeboom 2012; Hertel 2017; Oesch 2006).

In the latter half of the 20th century, research on job values paid close attention to the job content (Johnson 2002; Johnson and Elder 2002; Johnson and Mortimer 2015; Lindsay and Knox 1984; Mortimer 1975; Mortimer et al. 1986). This research shows that individuals select into occupations based on their extrinsic values (e.g. pursuit of income), intrinsic values, (e.g. interesting work), and social values, (e.g. co-worker and client relations), and that job rewards reinforce values. How job rewards and occupational tasks are related to larger organizing forces in society, such as the occupational structure and labor market is ambiguous, as all measures in this research are continuous. That is, similar answers to Likert scale questions on job rewards may relate to widely different positions in a social structure. For example, a medical doctor

and a store clerk both interact with clients regularly but do so in different contexts. The doctor is in a position of authority while the store clerk is not. Controlling for different aspects of a job may not capture the nature of the relationships.

Parallel to these literatures, psychological research on values developed theory, measures, and methods (see Chapter 2 and 4) (Schwartz 1992; Schwartz et al. 2012; Schwartz and Bilsky 1987; Schwartz and Boehnke 2004). Longitudinal studies in the psychological literature find a general decline in achievement and power values (e.g. extrinsic job values) and an increase in social values with age (e.g. social conformity and social job values) (Dobewall, Tormos, and Vauclair 2017; Schwartz 1992; Vecchione et al. 2016). Only three studies using this value theory examined differences between education levels or occupation (Almeida, Machado, and Costa 2006; Knafo and Sagiv 2004; Meuleman et al. 2012). Cross-sectionally, these studies find similar relationships between social stratification and values. That is individuals higher up the social and occupational hierarchy find social conformity less important than those lower in the occupational hierarchy, professionals working with clients endorse social values while managers, executives and entrepreneurs endorse extrinsic values such as power and achievement. To the best of my knowledge, there are no studies that used longitudinal data to examine the relationship between occupations and values as envisioned by Schwartz and colleagues.

This chapter seeks to reconcile and extend these literatures by combining their strengths. I use social class theory that distinguishes between socio-cultural occupations, managerial and organizational occupations (Oesch 2006). To address the ambiguity in value measurements, I rely on a psychological theory of personal values (Schwartz 1992) which encapsulates both Kohn's and the job value measures. The standard value measures allow a comparison of the current results to the psychological literature. Lastly, I use theory on status characteristics and gender to extend these literatures (Cech 2013; Ridgeway 2009; Ridgeway and Correll 2004).

The chapter is structured as follows. First, I will review the measurement and theory on values from these literatures and motivate the use of the Schwartz value theory. Then I review the major findings in these literatures and their conflicting predictions. Third, I incorporate research on gender inequality. Fourth I use a longitudinal panel from the Netherlands to examine the effects of values on the odds of graduating from different fields of study, the effects

of current occupation on values, and use fixed effects regression to examine changes in values during adulthood and whether these changes are moderated by occupation.

5.1 Job and Personal Values: Concepts and measurement

Both personal and job values can be divided by the content of their goals and their motivation. Furthermore, job values are derived from personal values (Consiglio et al. 2016). That is, personal values are cross-situational goals that motivate individuals; a job can be a means or an end to these cross-situational goals. Indeed, there is some correspondence between these value measures (see Table 1-1). In this section I will briefly review and compare the conceptual distinctions made in the job and personal value measures.

Job values are what individuals find important in the activities and rewards of a job. These are often divided into two categories, intrinsic and extrinsic values. Typical extrinsic job values include good pay, security, social status, and advancement. Examples of intrinsic job values are learning skills, a challenging job, and job discretion. In some studies, intrinsic job values are differentiated by content and include social (utility to society), and altruistic values (social relationships and care work).

The division between intrinsic and extrinsic values is based on self-determination theory (SDT) (Deci and Ryan 2000). This theory holds there are three psychological needs: autonomy, competence, and belonging. Fulfilling needs is best achieved when individuals are intrinsically motivated and internally rewarded, i.e. through experiencing certain psychological states rather than external validation or reward. As a result, intrinsically motivated individuals enjoy a higher level of well-being (Thibault Landry et al. 2016).

The personal values literature differentiates values based on motivation and goals (Schwartz et al. 2012). The distinction in motivation is based on evolutionary and social psychology³ and based on three broad requirements of human beings; survival, interpersonal relationships and group membership (Schwartz 1992). Most values are a mix of these three needs and cannot be divided by their intrinsic and extrinsic motivation. Nevertheless, the needs motivating personal values can be divided into growth and basic values. Growth values are more often intrinsically

³ Schwartz et al. (2012) later relabeled the motivational bases of values based on Maslow's theory of needs (Maslow 1999).

motivated as personal growth is achieved through agency and self-reflection while securing basic needs is largely responding to the environment.

Beyond the content and division of values, the job and personal value measures differ in the depth of their theoretical framework. It is important to contextualize specific values within a theory of values as it provides a systematic interpretation that allows researchers to place their results in a broader nomological network; how an individual's values are related to other facets of personality and stratification. The theory of basic human values organizes values in a circumplex structure (Schwartz 1992). This implies that there are trade-offs in values and that these tradeoffs have meaning for the evaluation of choices. Self-enhancement values are opposed to self-transcendence values in their goals, while openness to change values are opposed to conservation values in their goals.

Using theory-driven measures of values allows for a clearer interpretation of research. For example Mortimer et al. (1986) found external rewards decrease the importance of intrinsic job values. These cross over effects can be explained using the theory of basic human values: the reward increases the salience of values that are incompatible with intrinsic job values. Furthermore, the motivation and goal focus of values is important because it signals what these goals mean to the individual and indicates their relationship to the stratification of society. For example, valuing income for its status implies the family/person is already secure. Without a theoretical framework to distinguish goals and motivations, these meanings are obscured.

Table 5-1: Correspondence table between Value measures (examples) and the cross-sectional correlation between personal and job values (see Chapter 4)

Personal Values	Job Values	Kohn et al.
Self-enhancement (achievement and Power)	Extrinsic values (income, prestige, promotion) $r = 0.24$ ($p < .05$)	-
Self-transcendence (benevolence and universalism)	Altruistic Values/Social Values (doing something for society/co-worker relations) $r = 0.31$ ($p < .05$)	-
Conservation (security, tradition and conformity)	Extrinsic Values (income, security) $r = 0.18$ ($p < .05$)	Self-direction versus conformity (self-control, honest, acts like boy/girl should)
Openness to change (Stimulation and Self-direction)	Intrinsic Values (interesting work, learning new skills) $r = 0.38$ ($p < .05$)	Self-direction versus conformity

5.2 Literature Review Values and Occupations

The job and personal values literature show two processes influence values. The first process is the fulfillment of basic needs. Following Maslow's pyramid of needs, individuals with fewer opportunities and resources are likely to value basic needs rather than growth needs. Factors that shape life chances such as social class and education are important for this process. Previous research shows that stratification is related to conservation versus openness to change values (Kohn 1989, 1989; Kohn and Slomczynski 1990). Similarly, the job values literature shows socio-economic status to be positively related to intrinsic job values and negatively related to extrinsic job values (Johnson 2002; Johnson and Elder 2002). Experiences on the job are also important. In particular the complexity of work is related to self-directed parenting values (Kohn and Slomczynski 1990). From these previous works I expect conservation values to be positively associated with non-tertiary education and non-complex jobs while openness to change is likely positively associated with tertiary education and complex jobs (H1).

The second process that influences values is interpersonal interaction. In the job context, this refers to interaction with clients, colleagues, and superiors. These can be transactional, hierarchical, or egalitarian. The job values literature suggests that extrinsic and social job values, which most resemble the achievement and benevolence values, are associated with the managerial and socio-cultural work logic. Differences in job values between the work logics exist through a process of value socialization within the family and education, and selection into jobs based on values and are reinforced by job rewards. This leads to considerable stability in job values; Mortimer et al (1986) found extrinsic values measured 10 years earlier could explain 46% of the current variance.

Socialization of extrinsic and intrinsic values starts early, Mortimer (1975) found that college seniors who are sons of businessmen found extrinsic job values, such as income, important while those from professional families found intrinsic job values important, such as self-direction and a challenging job. The fact that relationship quality between father and son influenced the similarity between the son's job values and father's occupation strengthens the evidence for intergenerational socialization rather than peer or educational socialization.

Individuals also respond to their job environment and opportunities. This process can be observed from changes in job values from labor market entry and the first years of paid work. Initially, high school students place a high value on all job values but start to discriminate between them with some job experiences (Johnson 2001b, 2001a, 2002; Johnson, Sage, and Mortimer 2012; Tschopp, Keller, and Stalder 2015). Nevertheless, there is some matching between an individual's values and their job. Valuing social relationships is related to entering socio-cultural occupations while valuing income and prestige is related to obtaining a higher income (Mortimer and Lorence 1979). The rewards and conditions of jobs early in the career affect job values measured later. Income was related to a lower valuation of social values, while experiencing job autonomy increased the valuation of self-direction at work. Interestingly, the social content of the job did not affect the endorsement of social values, which was interpreted as an absence of socialization effects (Mortimer and Lorence 1979; Mortimer et al. 1986).

Indirect evidence of the role of benevolence and achievement values in selection into occupations has also been found in the personal values literature. One longitudinal study found personal value differences across fields of study. Students who enrolled in MBA programs value power and achievement more than other students and rated these values significantly higher

at graduation. Other cross-sectional evidence shows that humanities and social science students rate social-focused values such as helping others and traditions higher than others, on average. Lastly, science and technology students rate self-direction, stimulation, achievement, and power higher than others (Arieli, Sagiv, and Cohen-Shalem 2015; Bardi et al. 2014; Hofmann-Towfigh 2007; Krishnan 2008; Papastylianou and Lampridis 2016).

Overall, there is strong evidence for a direct relationship between the goals of values and the main rewards emphasized in the field of study and occupation. Fields of study and occupations which require hierarchical relationships are likely associated with higher self-enhancement values (H2). Fields of studies and occupations which require egalitarian relationships are likely associated with higher benevolence values (H3).

5.2.1 Value Change over the Life Course

Psychologists studying value change focus on socio-psychological development (Boer and Boehnke 2015) drawing on theorists such as Erikson (1959), who proposed psychosocial stages with corresponding developmental tasks. In adolescence this task is to build an identity or else succumb to role confusion. Marcia (1980) elaborated on Erikson and formulated a theory of identity formation. First, adolescents must explore roles in several life domains, this stage is labeled moratorium, and can lead to identity achievement; a conscious and deliberate commitment to an identity that integrates divergent roles into a coherent system. However, the process can also go awry leading to foreclosure or diffusion. In foreclosure adolescents adopt an identity given to them by others. In diffusion adolescents stagnate, neither exploring new roles nor committing to one. Other developmental tasks during moratorium are choosing an occupation, finding close friends, a partner, and deciding on moral and political beliefs (Harter and Bukowski 2012). These tasks involve exploration, risk-seeking behavior, and introspection, focusing attention on the self. Moratorium, therefore, requires person-focused values. In adulthood, individuals have responsibilities to partners and children, and investments that require considering other's needs and less risk-taking. In later ages, physical abilities decrease, and individuals are likely to prefer predictable and safe environments that require social order. Thus, as individuals move into adulthood, they are likely to become more social-focused in their values (H4) This includes increasing importance of conservation and decreasing importance of openness to chance and achievement.

Psychological studies on value development have largely confirmed these expectations. The personal values literature shows that social-focused values increase while personal-focused values decrease on average across the life course (Dobewall et al. 2017; Milfont et al. 2016; Vecchione et al. 2016). That is, self-transcendence values are stable and ranked first while conservation values increase in importance with age. The personal focused of openness to experience and self-enhancement decrease over the life course. However, the job values literature finds the opposite, social-focused values decrease with age while intrinsic values stay stable (Jin and Rounds 2012; Johnson 2002). A reason for the diverging findings may be the age range included in these studies. The longitudinal studies on personal values have a larger range of ages, from adolescence to old age, but rely on cross-sectional data or panel data spanning just a few years. In contrast, research on job values focuses on the transition from school to paid work using the Youth Development Study and the Monitoring the Future panel, which both follow 9th graders (15 years old) into their 30s.

There are also theoretical and methodological reasons for these diverging findings. As discussed earlier, the personal values theory defines narrower values than the job values literature. For example, extrinsic job values match two dimensions of personal values: self-enhancement and conservation. In the personal values literature these were found to decrease and increase across the life-course, respectively. This creates ambiguity in the generalization of results. I will examine differences between individuals in personal values before age 30 to replicate the job values literature and then continue to examine value change in adulthood, from ages 30-55, and whether these changes are moderated by occupational experiences.

5.2.2 Gender Differences in Values

It is known that men and women differ in their personal and job values. Men find person-focused values more important such as self-enhancement and openness to change, while women find self-transcendence values more important (Schwartz and Rubel 2005; Schwartz and Rubel-Lifschitz 2009). Similarly, the job values literature finds that women find altruistic and social values more important than men. In contrast to the personal values literature, the job literature also finds that women have higher intrinsic job values, which would correspond to the openness to change values (Herzog 1982; Johnson 2001a; Marini et al. 1996). Usually these gender differences are explained through the social roles that men and women normatively take up over the life course (Johnson 2001b; Schwartz and Rubel-Lifschitz 2009). However,

gender goes beyond roles and norms to shape identity and therefore the relationship between the self and behavior.

Ridgeway and Correll (2004) argue that gender is a multilevel system that includes “cultural beliefs and distributions of resources at the macro level, patterns of behavior and organizational practices at the interactional level, and selves and identities at the individual level.” At the macro level, cultural beliefs associate gender categories with abilities. Men are perceived as more dominant, assertive, competent, competitive, and ready for leadership than women. Women are seen as more communal and caring than men. (Greenwald et al. 1998; Ridgeway and Correll 2004). The knowledge that most others will evaluate targets with these standards leads us to adjust our evaluations and behavior to match the dominant cultural ideas. This can also affect the judgments of one’s characteristics and competencies, reproducing cultural stereotypes (Ridgeway 2009, 2014).

Values can be a mechanism for the reproduction and expression of gender (Hitlin 2003). That is as gender shapes identity; performing actions that fit in-group characteristics affirms gender identity (West and Fenstermaker 1995). For example, gender factors into decisions which fields of studies and occupations are most ‘suitable’ (Cech 2013; Correll 2004). Vleuten et al. (2016) show that gender segregation is related to gender ideology through its effects on occupational values and perceived competencies, using longitudinal data gathered in the Netherlands. Boys who have a more traditional gender ideology find helping others less important and income more important for their future occupation than girls. These preferences lead boys to choose gender-stereotypical fields of study. Girl's occupational values were also related to gender stereotypical choices in fields of study, but their gender ideology was only associated with their perceived competencies. Girls often choose health and care studies while boys often chose for economics and technical studies.

I expect that the values of benevolence and achievement, which distinguish between stereotypical male and female traits, to be associated with fields of study and occupation. However, gender also modifies the relationship between a value and a choice or behavior. That is since women are expected to be benevolent, the effect of benevolence on a female typed field of study is likely minimal. On the other hand, the effect of achievement on male typed fields of study is likely to differentiate women who endorse a “feminine” or “masculine” self. Therefore, I hypothesize that the benevolence and achievement values will be related to non-typical

choices of the field of study for both genders. That is, achievement is likely related to technical, administrative, and managerial fields of studies and jobs for women, while benevolence is related to socio-cultural fields of study for men (H5).

In terms of occupational effects interacting with gender we could expect a similar pattern. That is, if individuals are socialized to endorse certain values due to occupational tasks, then individuals in occupations are likely to be similar regardless of gender. Thus, gender atypical choices in occupations are likely related to the greatest differences in values within genders (H6). For example, men in socio-cultural occupations should differ more from other men than women in social-cultural occupations differ from other women in benevolence values. Similarly, women in managerial and organizational occupations are likely to differ in their valuation of achievement values compared to other women, and this difference is likely greater than that observed between men.

5.3 The Dutch Context

I use the LISS data collected in the Netherlands as it is one of the few panel data sets which includes personal values and information on occupations. Cross-national research on occupations and values has generally found similar associations, therefore there is no reason to suspect the results will not generalize to other countries (Kohn and Slomczynski 1990). However, the relationship between values and gender is likely to change depending on country context as gender equality and the welfare state shape women's opportunities. That is, personal values affect outcomes when there are different choices. In this section I review the Dutch education system and labor market and their role in sex segregation.

Career trajectories are influenced by individual-level characteristics and constrained by the occupational structure, the welfare state, education system, and labor market (Buchmann and Kriesi 2011; Diprete et al. 1997; Müller and Gangl 2003). Countries vary in the strength that individual and structural factors have on career trajectories. In the Netherlands, careers are structured by an occupationally segmented labor market which is supported by institutional links with the education system, collective agreements between unions, employer organizations, and government and welfare policies.

The Dutch educational system has a close correspondence between fields of study and occupation (Müller and Gangl 2003). Students are sorted on general ability and fields of study from an early age, providing employers with clear signals. The link is especially strong with

vocational education which coordinates with employers to provide students with occupationally specific skills. Therefore, the transition to the labor market is less volatile than in education systems which provides general skills. Occupational specific education reduces the investment costs and risks of hiring labor market entrants. As a result, employers attach less importance to general skills and job experience than in nations with general education systems, creating an occupationally segmented labor market. Indeed, Diprete et al. (1997), found that tenure and pre-employer experience had little or no effect on within and between industry and occupational mobility in the Netherlands. Labor market segmentation is also visible in response to structural change. Diprete et al. 1997 show that contraction in industries and occupations induce mobility between industries and occupations in the USA and Sweden but not in Germany and the Netherlands. However, expansion of the industry is related to job mobility within industries. Thus, the coordination between employers and education provides a matching function that facilitates the transition to the labor market and sorts jobseekers into industries and occupations based on credentials (Müller and Gangl 2003). This creates a close fit between fields of study and occupations and introduces strong path dependency in careers.

The segmentation of the labor market is reflected in the patterns of job mobility. First, overall job mobility in the Netherlands is at the European average but there is limited mobility between the public and private sector or between industries (SER 2011). Individuals often move within industries such as education, care, or the public sector. When individuals do move between industries it occurs between similar types of industries, such as financial and business services to ICT. Overall, the proportion of intra-sectoral job moves is twice that of inter-sectoral mobility (Zwinkels, Ooms, and Sanders 2009).

Intertwined with occupational segmentation is gender segregation. Gender segregation is driven by the conservative and corporatist organization of the labor market and welfare state. Its policies encourage a one and a half earner household, with women taking responsibility for childcare and often taking a part-time job. In 2015, 73% of working women had a part-time job while 21% of working men had a part-time job. One-quarter of employed women work 20-27 hours per week while another quarter work 28-34 hours per week, but 80% of employed men work 35 or more hours per week. Furthermore, the working hours of men and women are related to their life cycle. When young children are living at home women often do unpaid care work, indeed 57% of women in 2014 mention this as their main reason for taking part-time

work in the Netherlands (Hendrickx et al. 2001; Portegijs and Brakel 2016). Table 5-6 shows that jobs that are easily done part-time, such as clerical jobs, are mostly taken by women, while jobs that require a full-time commitment, the higher academic, independent, and supervisory professions are mostly taken by men.

Gender also creates occupational segregation from the bottom up. The emancipation report from the Dutch Central Bureau for Statistics reported the segregation index in fields of study was highest in vocational secondary schools, circa 20%. This indicates that 20% of students at the vocational secondary schools would have to change field of study to create an equal division of men and women (Portegijs and Brakel 2016). Due to the close link between education and the labor market, these field of study choices have an impact on occupational sex segregation. About twice as many women work for the government and in healthcare than men while the opposite is true for information technology, agriculture and technical industries (Portegijs and Brakel 2016).

5.4 Data and methods

The LISS panel is a representative sample of Dutch individuals who participate in monthly Internet surveys (Scherpenzeel and Das 2010). The panel is based on a true probability sample of households drawn from the population register. Households that could not otherwise participate are provided with a computer and Internet connection. A longitudinal survey is fielded in the panel every year, covering a large variety of domains including work, education, income, housing, time use, political views, values and personality. A household questionnaire is administered every month, providing monthly information on household status and socio-demographics. The sample includes respondents between 18-55 years of age. First and second-generation migrants are excluded, except in the field of study sample, as some fields of study did not have enough respondents for the models to converge.

In each year, the personality questionnaire, which includes the value measures, is fielded in March, however in 2014 and 2015 it was fielded in November. In 2017 and 2018 the administration of the personality questions switched back to March. In 2016 there was no funding for the personality questionnaire and was therefore not fielded. The questionnaire on work and schooling has consistently been fielded in April. The personality questionnaire was therefore fielded 7 months after the work and schooling questionnaire in 2014 and 2015 and one month before in the other years. Excluding the 2014 and 2015 did not change the results.

Attrition may bias the coefficients reported on the achievement value. Achievement was found to significantly predict the probability of drop out in a fixed effect logistic regression. Furthermore, between effect regression of Achievement on the number of times respondents were observed was significant, controlling for the recruitment year, gender, age, year of birth, and wave year. Respondents who were observed between four and seven (-.10) and those observed more than eight (-.20) times have significantly lower achievement scores than respondents observed up to three times. The age effects on achievement are likely downward biased.

5.4.1 Measurements

The LISS panel uses the Rokeach Value Survey (RVS) to measure respondents' personal values (Rokeach 1973). Respondents are asked "Which values act as a guiding principle in your life and which values are less important to you?" and to rate each value on a scale of 1 – extremely unimportant to 7 – extremely important. There are 34 items in the questionnaire. To control for automatic responses, any respondent who answered the same to more than 26 out of 35 items is excluded. This excluded 1,297 of observations out of the 36,251 observations with non-missing information on the RVS in the LISS data. Additionally, any respondent who scored lower than -4 on the value factors was excluded to prevent them from biasing regression coefficients (324 of cases excluded). I use four values: benevolence, achievement, conservation, and openness to change. The validation of these measures can be found in Chapter 4.

The LISS data does not usually provide ISCO codes but respondents self-identify their occupation. The respondents are asked to provide their current and first job. Occupational stability is high in the sample when measured as a change in the occupational category of a respondent over the observation period. Across occupations, about 80 to 89% of respondents do not report any changes. The occupational groups are presented to respondents with the following examples:

1. higher academic or independent profession (e.g. architect, physician, scholar, academic instructor, engineer)
2. higher supervisory profession (e.g. manager, director, owner of large company, supervisory civil servant)
3. intermediate academic or independent profession (e.g. teacher, artist, nurse, social worker, policy assistant)
4. intermediate supervisory or commercial profession (e.g. head representative, department manager, shopkeeper)

5. other mental work (e.g. administrative assistant, accountant, sales assistant, family care)
6. skilled and supervisory manual work (e.g. car mechanic, foreman, electrician)
- semi-skilled manual work (e.g. driver, factory worker)
7. unskilled and trained manual work (e.g. cleaner, packer)
8. agrarian profession (e.g. farm worker, independent agriculturalist)

The CentERdata institute, which is responsible for the LISS data, did code respondent's occupations for the 2012 survey year. This provided an opportunity to cross-validate respondents self-identified occupations with the Oesch classes. Overall, occupational categories matched the expected work logic and skill level 50% of the time (See Appendix A). However, the higher academic/ independent professions were composed of all three work logics. The first two occupational categories were therefore combined, as the respondents who self-identified as higher academic or independent professionals predominantly belonged in the higher supervisory profession. Additionally, it seems that most (associate) socio-cultural professionals identified with the intermediate academic or independent profession.

The LISS respondents are asked in which field of study they completed their highest education. Respondents choose from a list of 16 categories, respondents can select any number of these. Due to sample size, eight of these are used, including 1. Teacher and Education 2. Social and Behavioral Sciences 3. Economics, Management and Administration 4. Law and Public Administration 5. Mathematics, Natural Sciences and IT 6. Technical Crafts and Professions 7. Medicine, Healthcare and Nursing, and 8. Personal Services. Respondents could also answer: General, art, Humanities, Agriculture, Forestry and environment, Catering and recreation, Transport and logistics, Telecommunication, public order and safety, other area or I don't know.

Control variables include the number of children (0, 1-2, > 2) , marital status (Married, Separated/Divorced/Widow(er), Never Married), education level: primary school, lower secondary (VMBO), higher secondary (HAVO/VWO), lower vocational (MBO), higher vocational (HBO) or university education (WO), age and birth year are also included, and employment relation: employee, self-employed, and working for family business.

5.5 Research design

The LISS data does not include a sufficiently long series of observations to assess the selection and socialization hypothesis within individuals. Respondents are often observed in three

successive waves. Therefore, I divide the sample into two age groups to investigate 1. the effects of personal values on the choice of field of study before age 30 and 2. Differences in personal values between occupations from ages 31-55 and 3. The effect of occupations on personal values from ages 31-55.

In section 5.6.1, I examine whether personal values predict the field of study of young respondents (18-30) and do so separately for each gender. This age range is used in the job values literature and designed to test selection of occupations and fields of study. The sample of under 30 only includes individuals who are “in education” as their main occupation to rule out socialization effects from the labor market. Population averaged logistic regression model estimate the effects of independent variables on dependent variables for the average observation. We can, therefore, interpret the coefficients as the effect of a one-unit increase in the independent variables on the odds of the dependent variable for an average person. Due to the low number of cases and missing data I was unable to control for education level, parental background, and employment characteristics. The field of study models estimate the effects of the four values and control for age and are run separately for each gender. Respondents choosing one or more fields of study were retained in the sample, thus the regression coefficients show the odds of graduating from one of eight fields of study compared to all other fields of study.

In section 5.6.2 value differences between occupations are examined, following Kohn and Slomczynski (1990) and the job values literature (Jin and Rounds 2012; Johnson 2001b, 2002; Johnson and Elder 2002). These results concern respondents aged 31-55. An advantage of this age group is that relatively few life-course events are likely to occur and interfere with the effect of occupations on values. In this age group, education careers have most likely ended while occupational careers stabilize around age 35 (Härkönen and Bihagen 2011; Manzoni, Härkönen, and Mayer 2014; Wolbers, Luijkx, and Ultee 2011). I use between effects regression to show differences in personal values by the content of the job, job complexity, and gender. Job content and complexity are captured by the current occupation variable. Control variables include the number of children, marital status, education level, age, birth year, and employment relation.

In section 5.6.3, I go beyond these literatures to examine value change in later life, using an age range that few studies have examined longitudinally. To do this I use fixed effects

regressions, interacting age with the first job as a proxy for job experience. I do not use the current job as it is unclear how long respondents have been in their current job and whether this job is temporary or part of a long-term plan i.e. an aspired career trajectory. Using the first job standardizes the interpretation across respondents. Respondents are likely to report the first job of their career rather than other non-significant jobs. Additionally, any job changes in current job will alter the interpretation of the fixed effects estimates. Using the first job we can interpret the interaction with age as the effect of one year increase in occupational experience on personal values. The first job answers vary over successive waves, the lowest value of the first job is used in the regressions. Due to sample size and the detail required for the hypothesis, the categories 6, 7, and 8 were combined in the fixed effects regressions. Previous studies found non-linear effects of age on value measures, but these non-linear effects occur before age 35 or near retirement age (Milfont et al. 2016; Vecchione et al. 2016). Growth models and random intercept models regressing the value measures on age indicated there were no higher-order polynomials of age that increased model fit.

5.6 Results

First, we examine the differences in values between genders (see Tables 5-2 and 5-3). For both the early adulthood and adult samples the expected gender differences emerge. Men value achievement more than women while women value benevolence more than men. However, women also value conservation and openness to change more than men. In the adulthood sample, the gender difference in conservation and openness to change are less pronounced. Strikingly, the gender differences in benevolence and achievement are similar in both samples, despite the younger sample being born, on average, about 20 years earlier (1986 and 1968) and being in different stages of the life-course.

Table 5-2 Mean Gender difference between all respondents in values for respondents 18-30.

	Mean		Difference (F-M)	S.E.	T value	P value	Confidence	
	Male	Female					Interval	
Achievement	0.22	0.09	-0.13	0.03	-3.99	0.00	-0.20	-0.07
Benevolence	-0.26	0.15	0.41	0.03	12.74	0.00	0.35	0.48
Conservation	-0.29	-0.15	0.14	0.04	3.66	0.00	0.06	0.21
Openness to Change	-0.15	0.02	0.17	0.03	5.41	0.00	0.11	0.23

Note: coefficients from between effects regression with 4492 observations and 1863 respondents.

Table 5-3 Mean Gender difference in values for respondents 31-55.

	Mean		Difference (F-M)	S.E.	T value	P value	Confidence	
	Male	Female					Interval	
Achievement	0.03	-0.13	-0.18	0.02	-7.37	0.00	-0.23	-0.13
Benevolence	-0.19	0.19	0.42	0.02	19.36	0.00	0.37	0.46
Conservation	-0.08	-0.05	0.08	0.03	3.03	0.00	0.03	0.14
Openness to Change	-0.03	0.11	0.14	0.02	7.26	0.00	0.10	0.18

Note: coefficients from between effects regression with 12,173 observations and 5,120 respondents.

Next, we turn to gender segregation in the field of study. As seen in Table 5-4, women outnumber men in teacher training, social and behavioral sciences, medicine, healthcare and nursing, and personal services. Men outnumber women in mathematics, natural sciences and IT, and the applied technical fields of study. Men and women are equally represented in economics, management, and business administration.

Table 5-4: Field of Study by Gender

Field of Study	Male			Female			Total		
	N	yes	%	N	yes	%	N	yes	%
Teacher training	1311	31	0.02	1778	101	0.06	3089	132	0.04
Social and behavioral science	1311	53	0.04	1778	182	0.10	3089	235	0.08
Economics, management, business administration and accounting	1311	283	0.22	1778	239	0.13	3089	522	0.17
Law, public administration	1311	31	0.02	1778	58	0.03	3089	89	0.03
Mathematics, physics, IT	1311	197	0.15	1778	69	0.04	3089	266	0.09
Applied technical	1311	175	0.13	1778	48	0.03	3089	223	0.07
Medical, health services, nursing	1311	70	0.05	1778	250	0.14	3089	320	0.10
Personal services	1311	9	0.01	1778	60	0.03	3089	69	0.02

Gender segregation in occupations is visible in Table 5.5 and Table 5.6. Men aged 31-55 are over-represented in the higher occupations, making up about 70% of observations in the higher academic/independent and higher supervisory professions. There is also a clear gender divide in the intermediate professions. The academic or independent professions are dominated by women while the supervisory or commercial professions are dominated by men. Lastly, the other mental work category is mostly composed of women, while the skilled and supervisory manual occupations are mostly composed of men.

Table 5-5: Current Occupation and Gender, respondents between 32-55

Occupation	Gender		
	Male	Female	Total
higher supervisory profession	980 68.72	446 31.28	1426 100.00
intermediate academic or independent profession	661 30.66	1495 69.34	2156 100.00
intermediate supervisory or commercial profession	785 62.25	476 37.75	1261 100.00
other mental work	651 29.63	1546 70.37	2197 100.00
skilled and supervisory manual work	564 89.24	68 10.76	632 100.00
semi-skilled manual work	367 67.84	174 32.16	541 100.00
unskilled and trained manual work	37 11.31	290 88.69	327 100.00
agrarian profession	73 62.93	43 37.07	116 100.00
Total	4118 47.57	4538 52.43	8656 100.00

Note: First row has *frequencies* and second row has *row percentages*

Table 5-6: Tabulation of First Occupation by Gender

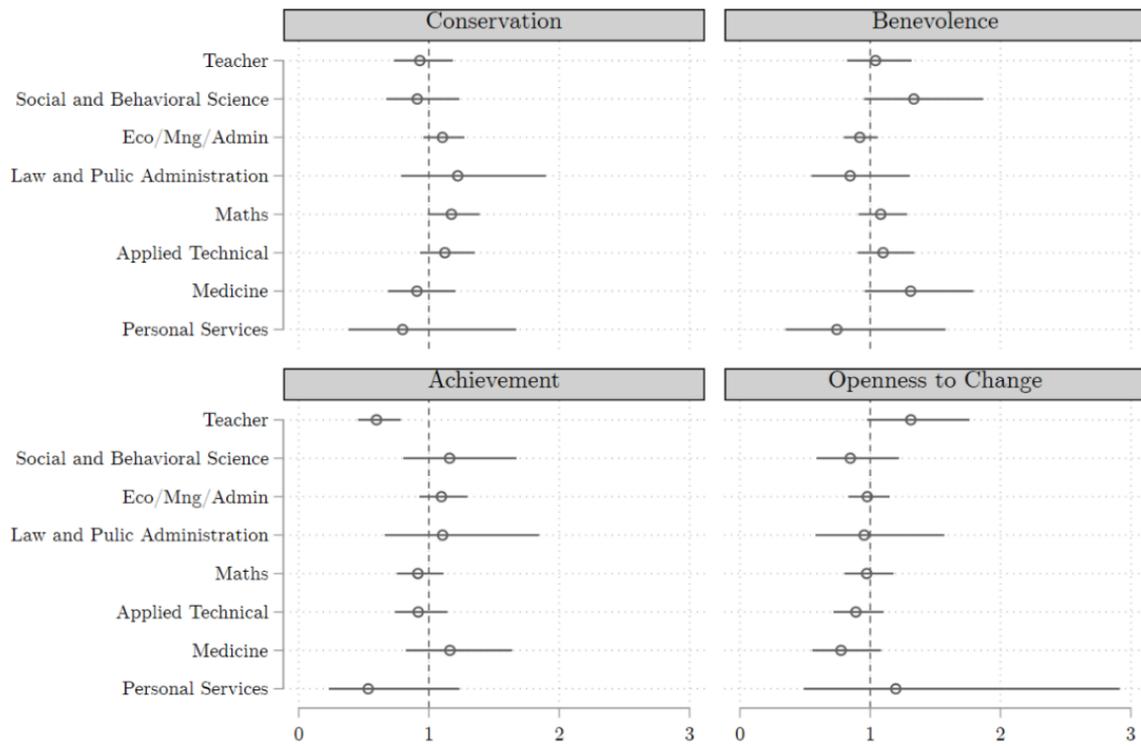
First Occupation	Gender		
	Male	Female	Total
higher academic or independent profession	396 61.88	244 38.13	640 100.00
higher supervisory profession	151 60.40	99 39.60	250 100.00
intermediate academic or independent profession	594 24.62	1819 75.38	2413 100.00
intermediate supervisory or commercial profession	603 53.94	515 46.06	1118 100.00
other mental work	917 27.41	2428 72.59	3345 100.00
skilled and supervisory manual work	1893 72.00	736 28.00	2629 100.00
Total	4554 43.81	5841 56.19	10395 100.00

Note: First row has *frequencies* and second row has *row percentages*

5.6.1 Fields of Study and Personal Values

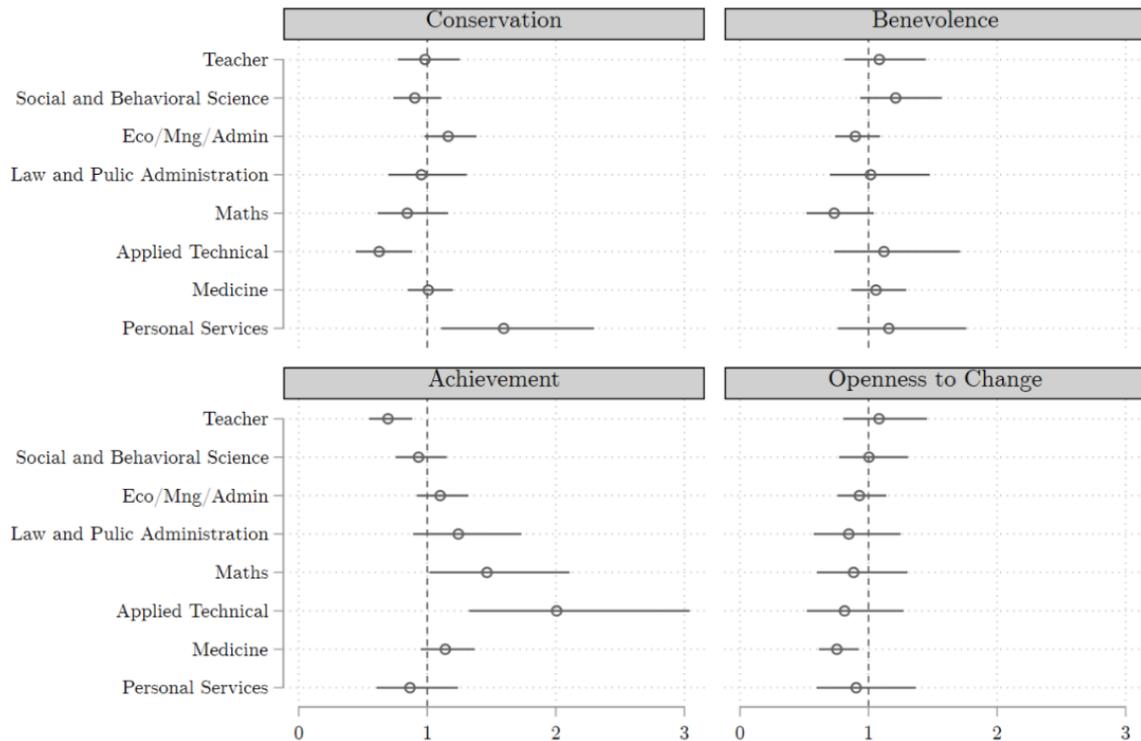
This section replicates the job values literature, showing differences in personal values among fields of studies of respondents younger than 31. There is some evidence that personal values, particularly benevolence and achievement, are related to choices in the field of study. Figure 5-1 shows between effects of men's values on the odds of graduating from a field of study. I expected fields of study which require hierarchical relationships to be associated with higher self-enhancement values (H2) while fields of studies that require egalitarian relationships to be associated with higher benevolence values (H3). Additionally, I expected gender atypical choices to be related to the greatest differences in values. Hypothesis 1 and 2 are not supported for men. There are no effects of benevolence or achievement on fields of study which match the value goals. However, there is support for hypothesis 3, men who are less achievement-oriented are more likely to graduate from non-typical fields of study. Men with lower achievement values are more likely to pursue a teaching degree.

Figure 5-1 The effect of Values on the odds of graduation from a field of study, men



Note: population average logistic regression model of the four values and age on the field of study of highest qualification of 991 men in the LISS panel (N= 1778).

Figure 5-2 The effect of Values on the odds of graduation from a field of study, women



Note: population average logistic regression model of the four values and age on the field of study of highest qualification of 744 women in the LISS panel (N= 1311).

Figure 5-2 shows that Women’s values are associated with field of study in a manner consistent with hypotheses 2 and 3. Concerning hypothesis 2, there is a direct correspondence between the goals of women’s values and their field of study. Women who value achievement have higher odds of graduating from mathematics, natural sciences, IT, and the applied technical fields. There is also support for hypothesis 3, that values interact with gender identity. Women’s achievement values lower the odds of obtaining a teaching degree. Additionally, women’s endorsement of conservation is associated with gender-typed fields of study. Conservation-oriented women are less likely to pursue applied technical studies and more likely to pursue studies in personal services.

5.6.2 Personal Value Differences Between Current Occupation

This section aims to replicate previous findings on the relationship between values and occupations. Social class and job complexity are expected to be related to openness to change

and conservation values, while the type of relationships with clients and colleagues are expected to be associated with benevolence and achievement values. Table 5-7 shows the effect of the current occupation on these four values.

Conservation values differ between occupations and education levels. I expected conservation to be more important for those with fewer resources, e.g. in a lower social class or with less than tertiary educational attainment (H1). As expected, men in the intermediate supervisory, skilled supervisory, and semi-skilled manual work rate conservation higher than men in intermediate academic or independent professions. Additionally, women in the other mental work (clerks) and skilled supervisory occupations rate conservation higher than women in intermediate academic/independent profession. As expected, lower educated men and women rate conservation values higher than the upper secondary educated. Tertiary educated women find conservation less important than those with upper secondary education. There are no significant differences between men with upper secondary and tertiary education.

In line with hypothesis 2, achievement values distinguish between social versus technical and managerial occupations. Men in managerial and technical occupations are associated with a 0.2 higher rating compared to intermediate academic and independent occupations. For women the effect is only significant for the intermediate supervisory or commercial professions.

In line with hypothesis 3, benevolence is more important for respondents in occupations with egalitarian social interaction compared to technical and managerial occupations. That is, benevolence values are more important for the intermediate academic and independent professions than for the higher supervisory professions for men and women. Men who work as clerks or as semi-skilled manual work also value benevolence less than the intermediate academic/independent professions.

There are also unexpected differences in achievement in terms of education. Men and women with primary and lower secondary education value achievement more than the higher secondary educated. This effect may be interpreted as a wish of the economically and socially disadvantaged to control the environment and signal competence, possibly boosting self-esteem (Jaspers and Pieters 2016).

The effects of occupations also differ between genders as predicted in hypothesis 5: men and women in gender-atypical occupations differ most in values from their peers. The reference

group for the regression coefficients of occupations is a female typed occupational category, the intermediate academic, and independent professions. Men in most other occupations differ in their benevolence values compared to these men. However, women in most other occupations share a similar rating of benevolence with women who practice the intermediate academic and independent professions.

There are two unexpected results regarding openness to change and benevolence. Openness to change ratings differ between education levels, but these are in the opposite direction than expected. Women and Men with university degrees are less open to change than higher secondary educated peers. Education is also associated with benevolence. Primary and secondary educated respondents value benevolence more than the higher secondary educated. University educated respondents value benevolence less than the higher secondary educated. This may be an effect of status characteristic, as higher status individuals are seen as less warm and more distant (Ridgeway 2014; Spruyt and Kuppens 2014).

Table 5-7 Between Effects of occupations on values for respondents aged 31-55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Conservation		Benevolence		Achievement		Openness to Change	
	Men	Women	Men	Women	Men	Women	Men	Women
Employment Relationship (ref: employee)								
Self-employed	0.05	-0.22**	-0.03	-0.01	0.07	-0.17*	0.05	-0.11*
	(0.07)	(0.08)	(0.06)	(0.05)	(0.06)	(0.07)	(0.05)	(0.05)
Family business	-1.55	0.32	-2.53†	-0.35	-0.56	0.15	-2.84*	-0.19
	(1.55)	(0.48)	(1.43)	(0.35)	(1.44)	(0.45)	(1.20)	(0.34)
Missing	-0.30	-0.27	-0.23	-0.17	0.52	0.09	-0.33	0.02
	(0.43)	(0.26)	(0.40)	(0.19)	(0.40)	(0.24)	(0.33)	(0.18)
Occupation (ref: Intermediate academic or independent professional)								
higher supervisory,	0.04	-0.03	-0.18**	-0.16**	0.21**	0.08	-0.00	-0.10*
	(0.07)	(0.08)	(0.07)	(0.06)	(0.07)	(0.08)	(0.06)	(0.06)
intermediate supervisory or commercial	0.19*	0.07	-0.12*	-0.03	0.22**	0.14*	0.06	0.03
	(0.07)	(0.07)	(0.07)	(0.05)	(0.07)	(0.07)	(0.06)	(0.05)
other mental work	0.06	0.11*	-0.14*	-0.06	-0.06	-0.03	-0.09	-0.02
	(0.08)	(0.05)	(0.07)	(0.04)	(0.07)	(0.05)	(0.06)	(0.04)
skilled and supervisory manual work	0.29**	0.15	-0.06	-0.04	0.30**	-0.11	0.08	0.05
	(0.08)	(0.18)	(0.08)	(0.13)	(0.08)	(0.17)	(0.06)	(0.13)

Table 5-7 Between Effects of occupations on values for respondents aged 31-55

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Conservation		Benevolence		Achievement		Openness to Change	
	Men	Women	Men	Women	Men	Women	Men	Women
semi-skilled manual work	0.21* (0.10)	0.01 (0.12)	-0.17† (0.09)	-0.09 (0.08)	0.15 (0.09)	-0.16 (0.11)	-0.01 (0.08)	0.03 (0.08)
unskilled /trained manual	0.10 (0.22)	0.11 (0.09)	-0.04 (0.20)	-0.08 (0.07)	-0.06 (0.20)	-0.07 (0.09)	0.09 (0.17)	-0.11† (0.06)
agrarian	0.18 (0.16)	0.34 (0.22)	0.14 (0.15)	-0.14 (0.16)	0.30* (0.15)	0.09 (0.21)	0.10 (0.13)	0.15 (0.15)
Education Level (ref: vwo, academic upper secondary)								
primary	0.43** (0.15)	0.26* (0.13)	0.21 (0.14)	0.11 (0.10)	0.25* (0.14)	0.21† (0.12)	0.04 (0.12)	0.13 (0.09)
vmbo	0.49** (0.10)	0.27** (0.08)	0.21* (0.09)	0.11† (0.06)	0.20* (0.09)	0.24** (0.08)	0.07 (0.08)	0.03 (0.06)
mbo	0.36** (0.09)	0.12 (0.08)	0.16* (0.08)	0.03 (0.06)	0.08 (0.08)	0.06 (0.07)	0.04 (0.07)	-0.02 (0.05)
hbo	0.20* (0.09)	-0.16* (0.08)	0.09 (0.08)	-0.08 (0.06)	0.08 (0.08)	-0.04 (0.08)	-0.00 (0.07)	-0.04 (0.06)
wo	-0.08 (0.11)	-0.34** (0.11)	-0.01 (0.10)	-0.24** (0.08)	0.04 (0.10)	0.03 (0.10)	-0.14† (0.08)	-0.19** (0.07)
Marital Status (ref: married)								
Sep/Divorced	-0.04 (0.08)	-0.08 (0.06)	-0.09 (0.07)	0.05 (0.04)	0.06 (0.07)	0.05 (0.06)	-0.13* (0.06)	0.06 (0.04)
Never	-0.20**	-0.18**	-0.10*	-0.07†	-0.04	0.01	-0.02	-0.03
Married	(0.06)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)	(0.04)	(0.04)
Children in Household (ref: none)								
1-2	0.03 (0.05)	-0.03 (0.05)	0.03 (0.05)	0.09** (0.03)	-0.03 (0.05)	-0.05 (0.04)	0.01 (0.04)	0.06* (0.03)
3 or more	0.01 (0.07)	-0.05 (0.07)	0.05 (0.07)	0.13* (0.05)	-0.03 (0.07)	-0.09 (0.07)	0.01 (0.06)	0.02 (0.05)
Year of birth	0.02** (0.01)	0.00 (0.01)	0.01 (0.01)	0.00 (0.01)	-0.02† (0.01)	-0.02** (0.01)	-0.00 (0.01)	-0.01 (0.01)
Age	0.03** (0.01)	0.01 (0.01)	0.02* (0.01)	0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)	0.01 (0.01)	-0.00 (0.01)
Constant	-0.44** (0.10)	-0.03 (0.09)	-0.19* (0.09)	0.21** (0.06)	-0.21* (0.10)	-0.19* (0.08)	-0.03 (0.08)	0.14* (0.06)
Observations	4,118	4,538	4,118	4,538	4,118	4,538	4,118	4,538
Respondents	1,434	1,615	1,434	1,615	1,434	1,615	1,434	1,615
R-squared	0.11	0.10	0.04	0.06	0.05	0.04	0.05	0.05

Standard errors in parentheses ** p<0.01, * p<0.05, † p<0.1

5.6.3 Intra-individual Value Change and First Job

In this section I report the results from fixed effects regressions, depicted in Figures 5-3 and 5-4 (see Tables 1 to 4, models 1 and 2, of Appendix B). The first job is indicative of a future career path and serves as a proxy for the working conditions experienced over the life course. The coefficients refer to a within person change in the importance of a value for a one-year increase in age, for the ages 31-55 of men and women. The value measures are standardized and therefore refer to a change in standard deviation. The coefficients are akin to running models separately for each occupation and their statistical significance can be interpreted as a difference from zero.

According to psychological theories of aging, individuals become more social-focused in their values (H4). According to the reinforcement model, job experiences reinforce the salience of this value. That is, managerial and organizational occupations maintain the importance of achievement (H2) while socio-cultural occupations maintain the importance of benevolence values (H3).

In support of hypothesis 4 and 2, the importance of achievement values decreases over the life course on average but is moderated by the first job. The effect of age on achievement ratings is statistically significant for the intermediate and lower-skilled occupations but not the higher managerial occupations, for both men and women. Indicating that occupational tasks reinforce existing values. However, the intermediate academic or independent professions also have a non-significant slope. Nevertheless, it can be argued that the job experiences of the professional occupations reinforce the importance of achievement values but that most individuals decrease the importance of achievement with age.

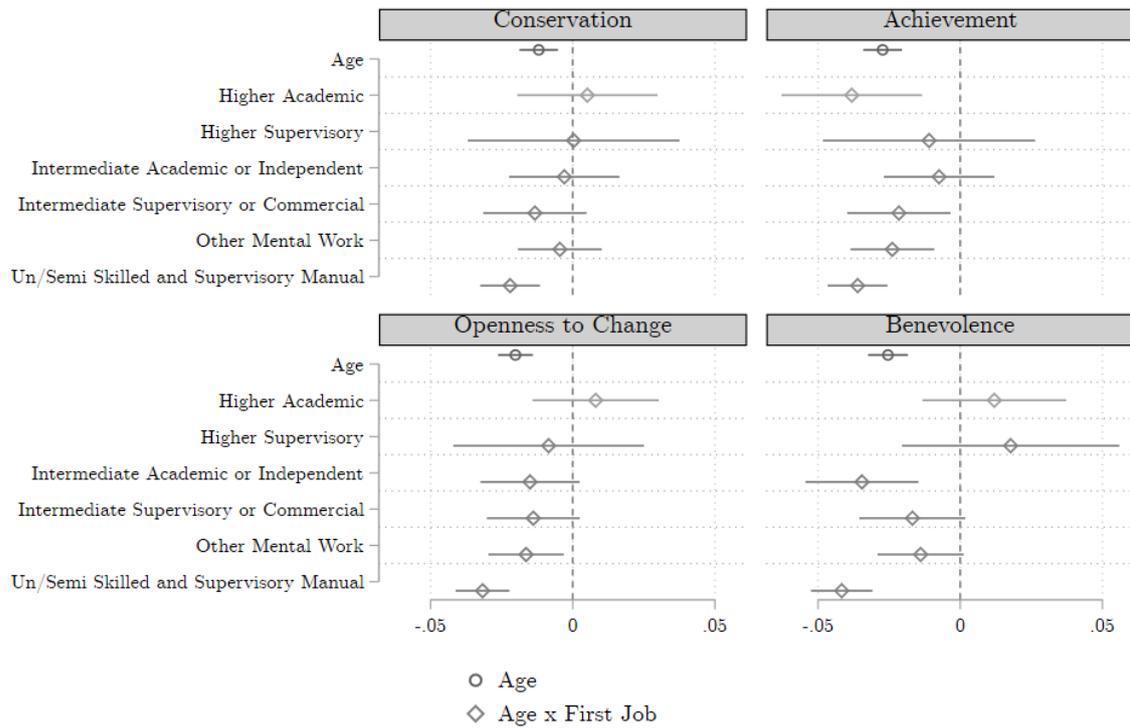


Figure 5-3 Effects of Age and Age by First Job Interaction on Value Orientations, Men (31-55)

Note: coefficient for age are from a fixed effects regression of age on personal values, the coefficients from age x first job are from a fixed effects regression interacting age with the first job. All first jobs have a slope and no overall slope of age is estimated.

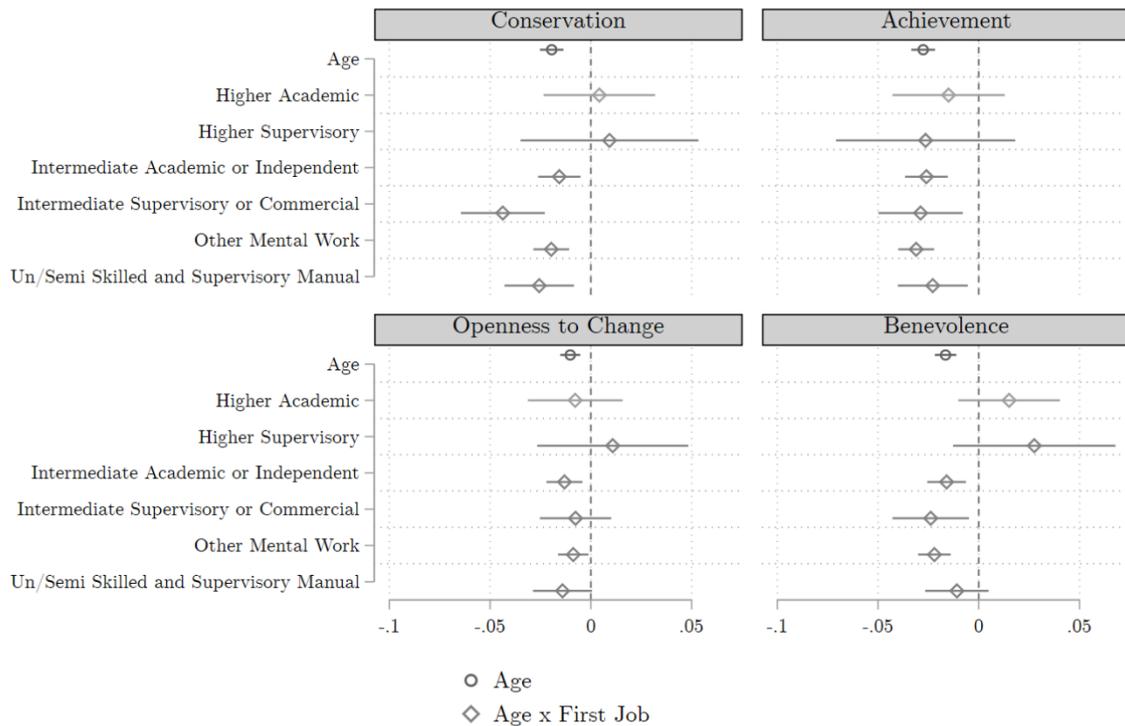


Figure 5-4 Effects of Age and Age by First Job Interaction on Value Orientations, Women (31-55)

Note: coefficient for age are from a fixed effects regression of age on personal values, the coefficients from age x first job are from a fixed effects regression interacting age with the first job. All first jobs have a slope. No overall slope of age is estimated.

Openness to change was expected to decrease with age (H4) while the job values literature leads us to expect only lower-skilled occupations to lower the importance of openness to change (H1). Again, both hypotheses find support. Age has a negative effect on the importance of openness to change. Additionally, age interacts with the first job. Men and women in the lower-skilled occupations decrease openness to change ratings significantly (see other mental and the (un/semi) skilled occupations). Women in intermediate academic and independent occupations also significantly decrease the importance of openness to change.

Benevolence values were expected to be stable in importance over the life course on average (H4) or to decrease except for individuals who are required to form relationships with clients in their occupation (H3). There is evidence against Hypothesis 4, there is a general decrease in the importance of benevolence values over the life course, and this is moderated by the first

job for both genders. Men and women with intermediate and low skilled occupations decrease their valuation of benevolence with age. Neither the job values nor the psychological literature provides explanations for the differences in the change of benevolence between occupations.

The importance of conservation was expected to increase with age (H4) and for the lower-skilled occupations (H1). Against expectations, the average change in rating is negative for men and women. There are differences in slope between the first job. Women in intermediate and lower-skilled occupations significantly decrease conservation with age. Men in un/semi-skilled occupations also significantly decrease their ratings of conservation with age. Again, neither the job values nor psychological literature provides an explanation.

Based on psychological literature I expected to see changes in values by age that match to socio-psychological development (H4). Based on the job values literature I expected that occupations reinforce specific values depending on skill level and occupational content (H1-3). Mixed evidence is found for both theories. A decline in absolute ratings of values is observed, for all values. This provides confirmatory evidence for the psychological literature in the case of openness to change and achievement but contradictory evidence in the case of conservation and benevolence. The effect size is similar for all values, around 0.01 to 0.03, indicating a uniform decline in ratings across the board. There is also evidence of reinforcement between skill levels for all values. Lower skilled occupations have a higher rate of decrease in ratings. The only value where there is evidence for the horizontal divide between occupations is in the higher professional occupations. Men with higher supervisory occupations do not decrease achievement values while men in the higher academic and independent professionals do.

5.6.4 Intra-Individual Value Change and Mean Item Response

The previous section showed that ratings of all values decrease with age. If all values decrease at similar rates, then the relative distance between them is stable. Psychological theory and research on values often emphasize the relative endorsement between two values (Schwartz 1992). Choices are ultimately about tradeoffs whose benefits and costs are weighted by their importance. For example, Burroughs and Rindfleisch (2002) show that materialism values are more harmful to well-being when individuals also endorse opposing collective values. Therefore, in this section, I explore whether personal values change net of the average rating of all values.

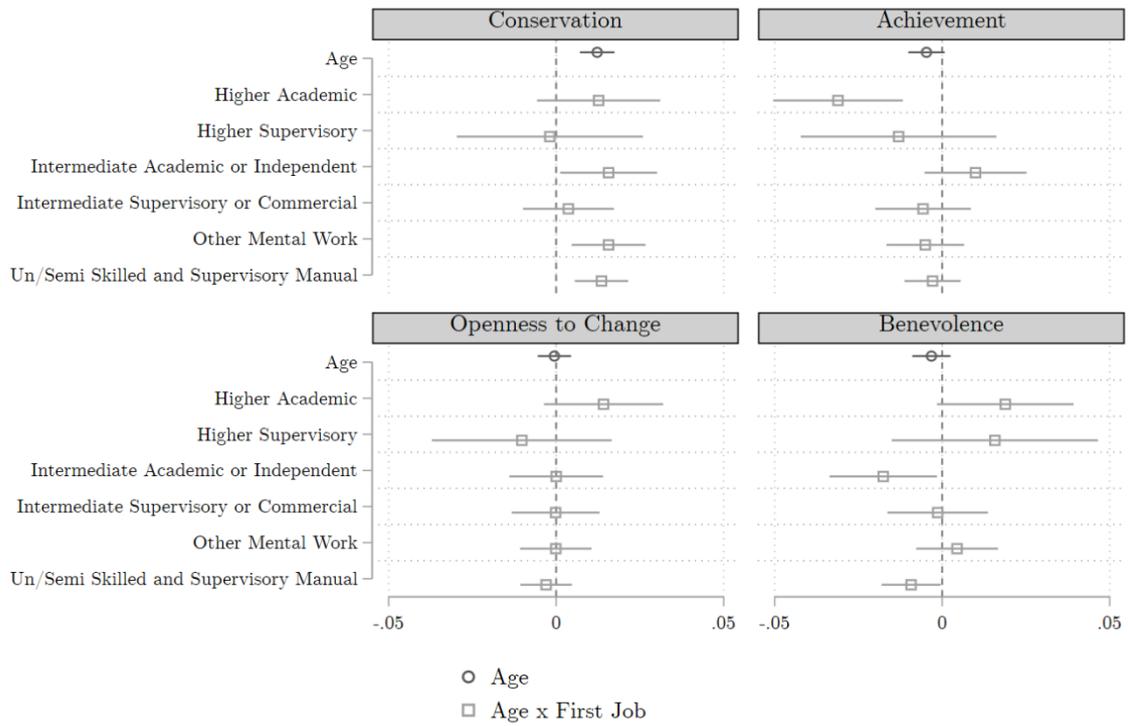


Figure 5-5 Effects of Age and Age by First Job Interaction, controlling for mean ratings, on Value Orientations, Men (31-55)

Note: coefficients for age are from a fixed effects regression of age and mean ratings on all value items on personal values, the coefficients from age x first job are from a fixed effects regression interacting age with first job and mean ratings on all value items. All first jobs have their own slope. No overall slope of age is estimated.

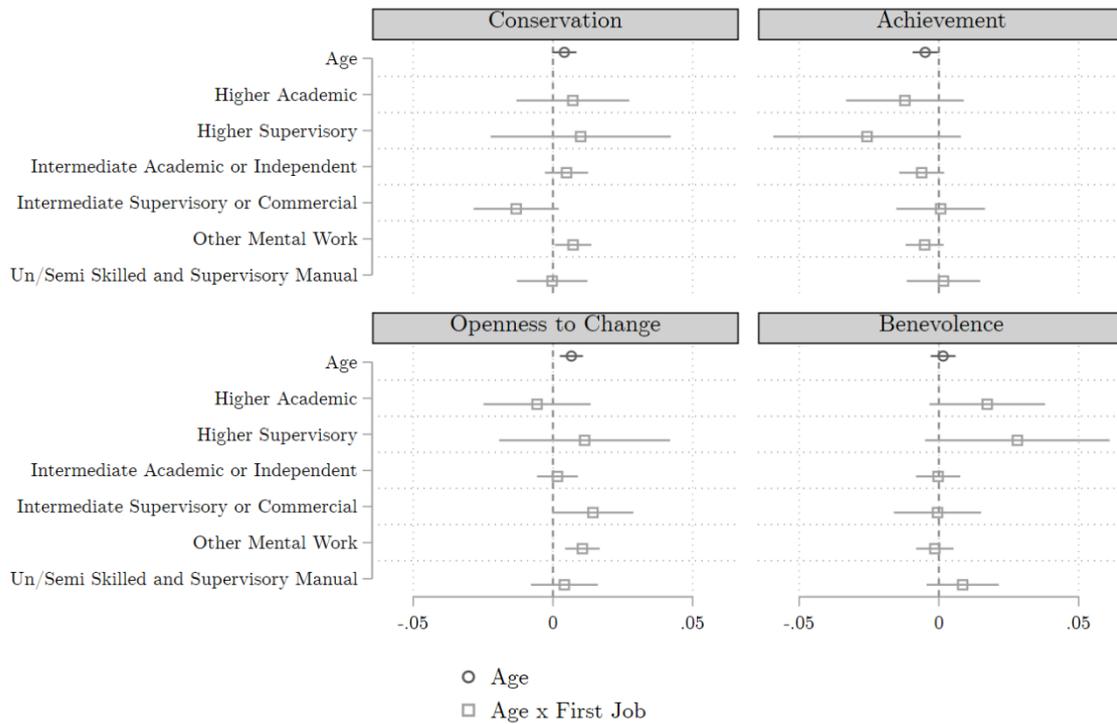


Figure 5-6 Effects of Age and Age by First Job Interaction, controlling for mean ratings, on Value Orientations, Women (31-55)

Note: coefficients for age are from a fixed effects regression of age and mean ratings on all value items on personal values, the coefficients from age x first job are from a fixed effects regression interacting age with first job and mean ratings on all value items. All first jobs have their own slope. No overall slope of age is estimated.

Figure 5.5 and 5.6 contain the estimated fixed effects coefficients controlling for mean responses. The full regression tables can be found in Appendix B, models 3-4. These show that the mean of the 12 items accounts for most of the value change observed previously. The tables in Appendix B show that a one standard deviation increase in mean ratings accounts for 0.73 to 1.02 standard deviation increase in personal values. Despite this strong relationship there are still effects of age on personal values.

There is some evidence for hypothesis 4. For both genders there is an overall decrease in the rating of achievement values. Additionally, conservation values of men decrease with age, however, women's conservation values do not. There is also evidence against H4, women rate openness to change higher with age, while there is no effect on conservation values. The effect

of age on benevolence is not significant for either gender, net of mean changes in value ratings. The effect of age on men's openness to change is also statistically insignificant.

Occupational experiences seem inconsequential for value change net of mean ratings. The effects of age on openness to change and benevolence are not moderated by the first job for men. The effects of age on openness to change, achievement, benevolence, and conservation are not moderated by the first job for women. However, there is some evidence for H1, that conservation values are reinforced in less complex jobs. Men's conservation values become more important with age for intermediate and low skilled occupations. However, coefficients are not significant in the intermediate supervisory occupation. Additionally, the slope for higher academic professionals is positive but also not significant.

The value trajectories indicate gender differences in values are either constant or increase. Men and women have a similar rate of decrease in achievement values, stabilizing gender differences in achievement. Women find openness to change more important over time while men do not have a significant slope, leading to a gender gap, with women attributing greater importance to this value than men. Men increase their importance ratings of conservation with age, except those with higher or intermediate supervisory occupations. Women do not increase the importance of conservation with age. Lastly, benevolence does not change with age, stabilizing the gender difference.

5.7 Discussion

This chapter reconciled diverging findings in the job and personal values literatures on value change over the life-course. Previous research shows that jobs are selected by individuals matching their values to occupational tasks and rewards and that job experiences further reinforce values. The psychological literature on values shows that personal values change as a function of psychosocial development. That is, benevolence is stable, conservation values increase in importance while person-focused values of achievement and openness to change decrease.

These theories make competing claims on the development of values over the life-course. This chapter replicated job values research using personal value measures with individuals before age 30 and extended this literature by examining value change from ages 30-55. Furthermore, this chapter extended this literature by incorporating gender as a status characteristic and identity. That is, values reflect identity while gender shapes identity, the life-course and frames

the meaning of choices to behavior. Therefore, gender was expected to moderate the association between values, fields of study, and occupations.

Part one of the results section replicated the findings from the job values literature, showing that personal values differ between fields of study and occupations. Value differences between fields of study were mostly limited to those atypical to each gender, that is, men who studied teaching valued achievement less than other men while women who studied applied technical fields valued achievement more than other women. This indicates that gender shapes values and their relationship to choices and that some choices require more agency. Gender deviant field of study choices are associated with strong personal motivation while gender-typical choices are not.

Part one of the results also showed there is an association between current occupation and personal values for individuals who are employed and between 31-55 years of age. Social-focused occupations are associated with higher benevolence and lower achievement values while managerial and organizational occupations are associated with lower benevolence and higher achievement values. These associations are likely due to selection and socialization effects, as shown by Johnson (2001b) and Mortimer and Lorence (1979), and corroborate the job values literature. Furthermore, differences in conservation follow a social class gradient, where education and the skill level of occupations are related to lower conservation ratings, as previously found by Kohn (1989).

The differences in values between occupations were more pronounced than the effects of values on fields of study would lead us to believe. This indicates a divergence in values between occupations over time. This development would be natural considering occupations become central to identity in middle-adulthood, while field of study is less salient to adolescents than other developmental tasks. Additionally, middle-adulthood is a relatively stable life-course period while adolescents and young adults are in a period of rapid change which may also influence their values. Therefore, it seems that fields of study and occupations are selected into based on personal values but that the accumulation of occupational experiences creates larger differences over time.

Second, I examined the value change of individuals between ages 31-55. Taking advantage of the occupationally segregated Dutch labor market, the respondent's first job was taken as a proxy for occupational experiences over the life course. The psychological literature predicts a

general decline in person focused values and an increase in conservation values. The job values literature predicts a reinforcement of values based on job content. Although I found some support for hypothesis from both literatures, the most striking result was an overall decrease in the absolute importance of all values. This result did not fit the predictions made by the job values nor the psychological literature. However, some studies have found an overall decrease in absolute ratings of job values for respondents before age 30 (Johnson 2001b; Johnson and Elder 2002). First, we found that the complexity of work impacts the ratings of conservation and openness to change values, second, we found that the content of the job impacts ratings of achievement values, and third, that the occupational complexity impacts the rate of decline of all values and therefore also the relative distances between opposing values. As relative endorsement of values is important for choices, I decided to examine within-person value change net of the average decline in ratings.

Changes in the average rating of all values accounted for nearly all the value change. However, there were still significant decreases in achievement values with age for both genders, while conservation values increased with age for men but not women. Most occupational experiences seem inconsequential for value change net of mean ratings. However, men's conservation values increased for low skilled but not high skilled occupations. These results support the psychological aging hypothesis, that we become more social-focused as we age. However, openness to change also increased with age for women but did not change for men. Milfont et al. (2016) found that women decrease openness values faster than men in New Zealand. Therefore, it seems that neither the job values nor psycho-social development can fully explain the results.

Reconciling the two literatures on values is difficult with the present study as substantive and data limitations do not rule out alternative explanations. The results showed a clear decrease in the importance of all values and the point estimates indicate differences were moderated by occupation, but these were most often not significant. The use of a proxy measure of occupational experiences, namely first job, makes any definitive conclusion untenable. Likely, the self-identified occupational categories in the LISS data do not provide enough detail to tease apart the socio-cultural from managerial occupations. Furthermore, there was a general lack of data, some occupational categories were scarcely represented and although the LISS panel has been running for 10 years, respondents were observed for an average of 3 years (see

Table 1-12 in Appendix B). Long term value change was therefore not observed as much as extrapolated from successive panels. Nevertheless, the value differences observed between occupations in section 2 and the interaction effect between first job and occupation in section 3 indicate that occupations do impact personal values, what is unclear is when this happens.

Lastly, these results provide an interesting direction for future research in social mobility. Research on social mobility and stratification takes a structural point of view, showing how conditions of life, i.e. social origins, impact chances to attain education and class positions. The results presented here indicate individuals are not only constrained in their choices through economic factors but also make choices based on their personal beliefs and that these choices have long term consequences for value change over the life-course. These personal beliefs are shaped by gender identity and social origin (Kohn 1989; Marini et al. 1996; Mortimer 1975; Mortimer et al. 1986; Schwartz and Rubel-Lifschitz 2009). Therefore, personal values could provide a mechanism for the reproduction of horizontal distinctions found within occupational hierarchies. For example, Weberian and Marxist approaches to class argue that classes differ qualitatively in the sources of power in employment relationships, sources of capital, and therefore their political interests (Hertel 2017; Oesch 2006). Alternatively, micro-class theorists argue that social classes are socially salient occupational groups (Jonsson et al. 2009; Weeden and Grusky 2005). Whether self-selection in occupations conditioned by social origins is strong enough to argue for a micro rather than macro class approach is open to debate.

5.8 Conclusion

This chapter drew on the job and personal values literature to test competing claims on the development of values over the life course. The personal values literature claims individuals become more social-focused in their values while the job literature claims that occupations are selected into based on the goals of values and that occupational rewards reinforce values. The results presented here show a complex interrelation between the two processes and indicate that the absolute and relative ratings of values can lead to different conclusions. First it seems that occupations are associated with benevolence and achievement values through a process of selection and accumulated experiences that are shaped by gender as a status characteristic and identity. Second, occupational experiences moderate the absolute change in ratings of personal values, as the job values literature has shown. Third, there is an overall decline in value ratings with age which creates stable relative distances between values. There were not any clear

moderation effects of occupation on relative ratings of values. Fourth, achievement values decrease in their relative importance within the values system with age.

Chapter 6 Interdependence in the Age of Individualism: The effect of personal values on first marriage

The Second Demographic Transition (SDT) narrative claims that personal values play a central role in explaining changes in demographic behavior over the 20th century (Lesthaeghe 2010; Zaidi and Morgan 2017). It argues that the increasing desire and ability for individuals to pursue self-development led to alternative lifestyles, increasing the rate of cohabitation and divorce and decreasing the rate of marriage and fertility. This chapter makes two contributions to the SDT narrative. First it refines the theoretical arguments by adding current psychological perspectives on self-development and personal values. Using the theory of basic human values (Schwartz 1992), I will argue the SDT narrative conflates two value orientations. On the one hand the SDT narrative and measurements address openness to change and conservation values. That is, the choice between autonomy and social conformity. On the other hand, the SDT narrative frames demographic behavior as a trade-off between individualism and interdependence. In the SDT narrative these are also presented as expressions of openness to change and conservation values. This practice equates individualism with autonomy while these are independent psychological constructs (Chirkov et al. 2003; Ryan and Deci 2006). I argue that decisions regarding interdependence and individualism are more accurately described as expression of self-transcendence and self-enhancement values. Combining the openness to change versus conservation value dimensions with the self-transcendence versus self-enhancement dimension is problematic as these values are motivated by different needs and have different goals. In fact, both self-transcendence and openness to change values are based on self-developmental needs. This implies that some self-developmental values increase the rate of marriage and fertility, contrary to what the SDT narrative claims. These refinements allow the SDT narrative to clearly incorporate gender, a shortcoming in its current form (Bernhardt 2004; Zaidi and Morgan 2017). There are large gender differences in the importance attributed to self-transcendence and self-enhancement (Borg 2019; Schwartz and Rubel 2005).

The second contribution is empirical. In this chapter I show that benevolence and openness to change values effect the probability of marriage and cohabitation using longitudinal data from the Netherlands. There are two narratives which explain rates of marriage and cohabitation. Both agree that the contraceptive revolution, the gender revolution and the sexual revolution

changed the probability, timing and ordering of demographic behavior. However, the two narratives focus on different factors. One focuses on economic and institutional factors (Mills and Blossfeld 2013) and the other on ideational factors (Lesthaeghe 2010; Van de Kaa 1987). Among the institutional factors are rising educational attainment and uncertainty on the labor market which raise the age of marriage by delaying stable employment. Furthermore, the reduction of gender inequalities in education and employment change the marriage calculus for women (Becker 1998; Oppenheimer 1988). In this chapter I focus on ideational factors but control for employment status, occupation and education of men and women as well as the unemployment rate. The Netherlands is a good test case as social norms on family formation and gender provide freedom of choice. However, there are also institutional conflicts which create considerable trade-offs for men but more so for women. To the best of my knowledge this is the first contribution that uses theory and measurements from the theory of basic human values to establish a relationship between personal values and demographic behavior using longitudinal data. Studies in the SDT literature often use ad-hoc measures of values and cross-sectional data (Lesthaeghe 1991; Lesthaeghe and Moors 1995; Surkyn and Lesthaeghe 2004a).

6.1 Staying True to Theory in Measurement

Lesthaeghe and Van de Kaa cite two sources as the intellectual origins of the SDT narrative (Lesthaeghe 2010; Lesthaeghe and Van de Kaa 1986; Van de Kaa 1987). The first is Aries (1980) who argued self-actualization is the predominant motivation for childrearing after the 1960s. Childrearing becomes an optional goal that competes with other goals and can thereby be delayed or foregone. The second intellectual foundation is Maslow's theory of needs (Maslow 1943, 1999). Maslow observed that rising living standards shift the motivational basis of values from safety to self-actualization needs. Self-actualization is understood as the end stage of self-development. Values motivated by safety needs can be characterized as a preference for order and predictability. These find expression in the importance attached to tradition and social control. I will refer to these as conservation values following Schwartz (1992). Values motivated by self-actualization include autonomy and self-expression, which Schwartz refers to as openness to change values. The SDT narrative contends that the rising importance of openness to change and declining importance of conservation values led to a proliferation of living arrangements, sub-replacement fertility and rising divorce rates within the economic and cultural context of the late 20th century.

The SDT narrative presents these values as a single dimension which ranges from openness to change to conservation. These are assumed to be motivated by safety and self-actualization needs. Individualism is also mentioned as part of this dimension and categorized as an openness to change value (Lesthaeghe and Moors 1995; Moors 2008; Surkyn and Lesthaeghe 2004a; Van de Kaa 1987; Zaidi and Morgan 2017). However, it is not possible to reduce the complex process of human self-development from safety motivated to self-actualization into a single dimension. Primarily because self-actualization addresses several distinct human needs each with their own causes and consequences. These are represented on at least two different value dimensions (Bilsky, Janik, and Schwartz 2011; Cieciuch et al. 2014; Schwartz 1992; Schwartz et al. 2012; Schwartz and Bilsky 1987; Schwartz and Boehnke 2004). Moreover, individualism is not an orientation associated with self-actualization (Chirkov et al. 2003; Ryan et al. 2015; Ryan and Deci 2006). The SDT narrative could profit from distinguishing its value dimensions. By doing so it would align itself more faithfully with the theories and concepts it relies on. In the next section I will separate individualism from self-actualization and incorporate current psychological perspectives on self-development into the SDT narrative and connect these to two value dimensions: Openness to change versus conservation and self-transcendence versus self-enhancement.

6.2 Distinguishing Components of Self-development from Individualism

Humanistic psychology defines the process of self-development as an intra and interpersonal process. The intrapersonal includes a rising concern with autonomy and the rejection of external regulation of behavior (traditional authority) while the interpersonal includes seeking intimate relationships, open mindedness and equality (Baumeister and Leary 1995; Deci and Ryan 2000; Gere and MacDonald 2010; Maslow 1999). In fact, current psychological perspectives on self-development explicitly include caring relationships and pro-social behavior when describing self-development (Huta 2016; Huta and Ryan 2010; Huta and Waterman 2014; Ryan and Deci 2001). In Maslow's terminology individuals self-actualize when they pursue both the intra and interpersonal aspects of self-development (Koltko-Rivera 2006; Maslow 1943, 1999).

The intra and inter-personal aspects of self-development are two separate value dimensions as they differ in their motivating needs (Schwartz 1992). The first dimension includes openness

to change and conservation values. The SDT narrative clearly identifies these values as playing a role in demographic behavior. For example the value orientations in Lesthaeghe and Moors (1995, 2002) and in Surkyn and Lesthaeghe (2004) include gender norms, secularization and unconventional civil morality and marital ethics. The second dimension consists of self-transcendence and self-enhancement values. The SDT narrative identifies the role these values play in household and fertility behavior as individuals face choices between interdependence, such as marriage or childrearing, and independence needed for career success or other personal goals. However, the SDT narrative does not differentiate between the two tradeoffs. For example, Surkyn and Lesthaeghe (2004) code items on the importance of companionship in marriage and the social status of a job as either conformist or non-conformist. Likewise, Moors (2008) conceptually categorizes items on the importance of socio-economic success under the rubric of autonomy and self-development. As a result, individualistic choices are framed as expressions of openness to change values. Individualism must be distinguished from openness to change as they are independent psychological constructs.

The pursuit of individualism and autonomy differ in their effects on behavior and mental states (Ryan et al. 2015; Ryan and Deci 2006). Autonomy is the feeling that behavior is self-endorsed. It allows us to attribute behaviors to ourselves and thereby plays an important role in the creation of psychological resources such as belonging and self-esteem. Furthermore, autonomous behavior contributes to the perception of a coherent and integrated self (Deci and Ryan 2000). Autonomy is thus an integral aspect of self-development as it concerns the *regulation* of behavior in a manner that satisfies needs. However, it does not *prescribe* behavior⁴. Individualism does prescribe behavior. It is an emphasis on independence and self-sufficiency which implies a retreat from social networks and social relationships. Individualism is not based on needs for safety or autonomy and is not associated with self-regulation. We can be forced into independence or autonomously pursue it (Chirkov et al. 2003). Likewise, we

⁴ For brevity's sake I am contrasting autonomous to heteronomous behavior. These are two poles on a continuum of self-regulation. Autonomous behavior is completely intrinsically motivated and associated with interest, enjoyment and satisfaction. It is perceived as being caused by the person and thereby builds up psychological resources. On the other end of the spectrum is heteronomous behavior that is completely extrinsically regulated. Heteronomous behavior is motivated by direct rewards and punishments and is a process of compliance and reaction. Most actions in daily life are likely motivated by introjection or identification. Introjection is motivated by ego involvement, approval from others or the self. Identification is the conscious valuing of activity and self-enforcement of the goals (Ryan and Deci 2000).

can autonomously seek interdependence and follow social norms. Therefore, individualism cannot be equated with openness to change⁵. Lesthaeghe (1991) initially acknowledges that autonomy and individualism are separate orientations. Nevertheless many studies in the SDT literature include individualism as an aspect of self-actualization (Lesthaeghe 2010; Ron Lesthaeghe and Moors 2002; Moors 2008; Surkyn and Lesthaeghe 2004a). It seems there is a disconnect between narrative and measurement.

The SDT narrative clearly identifies tradeoffs where individualism plays a role and autonomy is used to make decisions. For example by noting the use of cost-benefit analysis in fertility and career decisions which heavily weigh self-fulfillment (Billari et al. 2004; Van de Kaa 1987) and a “disengagement from civic, professional and community-oriented networks” (Lesthaeghe 2010:219). Autonomous decision-making is apparent as questions are framed in terms of self-fulfillment. However, the outcomes are based on a tradeoff between family and career not between autonomy and social conformity. Indeed, relationships are used as vehicles of personal growth and fora of self-expression (Cherlin 2004; Giddens 1992b; Keizer and Hiekel 2015). Thus, individuals weigh the costs and benefits that the expression of self-transcendence or self-enhancement values provides. In short, the self-expressive utility for many demographic behaviors is likely related to self-transcendence and self-enhancement values. These values are motivated by love and esteem needs respectively and cannot be equated with openness to change and conservation values which are based on autonomy and safety needs.

The expression of self-enhancement and self-transcendence values imply different choices and consequences for men and women (Bernhardt 2004; Hakim 1998). Self-enhancement values

⁵ The necessity to distinguish the need basis and goal content of values has likely gone unnoticed because there has been a shift towards more personal and more growth focused values over cohorts. Dobewall, Tormos, and Vauclair (2017) show that each cohort rates growth based and personal focused values more important than the last (see also van Herk and Poortinga 2012; Tormos, Vauclair, and Dobewall 2017; Vecchione et al. 2016), but GDP was associated with the importance of self-transcendence *over* self-enhancement values. Given that there is inequality in wealth and incomes within societies, some individuals are stuck in the middle of Maslow’s pyramid and base their value systems on esteem over love and self-actualization needs. Furthermore, popular value instruments in sociology cannot distinguish self-transcendence from self-enhancement orientations as they lack items on intimate personal relationships or social status (Dobewall and Rudnev 2013; Inglehart 1990; Kohn 1989).

find expression in career development and compete directly with family, but more so for women than men. A full-time job is the default for men who often also have a family. Women face institutional barriers to achieving status on the labor market and family formation. Women must interrupt labor market participation (LPM) if they wish to have a child, often resulting in a gendered division of labor within the household (Dechant and Blossfeld 2015; Grunow and Evertsson 2019; Jansen and Liefbroer 2006) and negative consequences for future LMP (Blossfeld and Hakim 1997; Hendrickx et al. 2001). The choice between career and family is therefore stark. Women who prefer achievement or social status may forego or postpone marriage. Thus, the expression of self-enhancement values is likely to have greater consequences for women.

Gender is also associated with the importance individuals attribute to self-transcendence and self-enhancement. Gender is a central concept in meaning making and our understanding of ourselves and interaction (Ridgeway 2009; West and Zimmerman 1987). Cultural stereotypes on gender emphasize communality in women and agency in men (Ellemers 2018). The framing of behavior within a gendered system results in gender differences in values as individuals internalize information from social roles and others' evaluations to form their self-concepts. As a result, women value self-transcendence more than men while men value self-enhancement more than women, on average, (Borg 2019; Schwartz and Rubel 2005) and these differences emerge in childhood (Block et al. 2018; Uzevovsky, Döring, and Knafo-Noam 2015). Gender is also likely to modify how men and women apply their values to behavior. Values are abstract representations of desirable goals (Schwartz 1992) which are put into practice through instantiations as prescribed by cultural systems of meaning (Hanel et al. 2017). A gendered identity within a gendered social system is likely to create differences in the application of values to behavior. Gender atypical choices may be more strongly related to personal values than those which are gender typical.

In sum, I argued that the SDT must broaden its value measures as self-development and self-actualization include autonomy and the pursuit of social relationships. The claim that self-developmental value orientations hamper partnership formation *at the individual level* is therefore theoretically untenable. However, the rising priority of openness to change over conservation values does bring union formation in competition with other goals (Lesthaeghe 1991; Lesthaeghe and Van de Kaa 1986). Thus, to test the predictions made by SDT narrative

we must measure the self-developmental value orientation of openness to change and self-transcendence and their competing and opposing values, conservation and self-enhancement. Additionally, we can expect the values to behavior relationship to differ between men and women as their identity and the institutional context create different trade-offs.

6.3 The Current Study

This chapter will examine which values are associated with first marriage and cohabitation in the Netherlands using predictions made by the SDT narrative and value measures constructed using the theory of basic human values. I utilize the LISS panel, a longitudinal and nationally representative data set from the Netherlands and fit discrete event history models with cohabitation and marriage as outcomes. I use four values in these models: benevolence, achievement, openness to change and conservation. The achievement and benevolence values were chosen over the broader higher order values discussed so far as they directly address interpersonal relationships and social status. In this section I will motivate the outcome events and review similar studies. The section following this one will review the cultural and institutional context of the Netherlands.

Marriage is chosen as the event to study because it is a definite step towards interdependence and is culturally framed as a self-expressive act. Marriage is perceived as a celebration of a worthwhile relationship which enables personal growth for both parties (Cherlin 2004; Giddens 1992b). In the Netherlands this understanding of marriage is reflected in the seasonal pattern of marriages which occur in the May and summer vacations when it is convenient to have a party. The alternative is a registered partnership. These are quiet affairs which are equally prevalent across the year and often occur during weekdays (te Riele and Stuckradt 2018). Although marriage and registered partnerships have legal advantages that ease joint investments like buying a house or raising a child, marriage's primary value is a symbolic celebration of a relationship in which both partners can pursue self-development (Keizer and Hiekel 2015) while registered partnerships are a legal formality.

Cohabitation is included as an outcome because it is often a prelude to marriage (Clarkberg et al. 1995; Furstenberg 2014; Keizer and Hiekel 2015). Some individuals use cohabitation to gauge their partner's compatibility and therefore is a part of the marriage process. However, cohabitation is also selected into based on preferences (Clarkberg et al. 1995) and affects preferences (Lesthaeghe and Moors 2002). Individuals who value independence are more likely

to move out of the parental home and those having experienced cohabitation find independence more important. Marriage before cohabitation, on the other hand, is related to conservation values (Studer, Liefbroer, and Mooyaart 2018). Given that most individuals cohabit before marriage in the Netherlands (Feijten and Mulder 2002; Mooyaart and Liefbroer 2016), it is important to test whether there are differences between the effects of values on cohabitation and on marriage.

A few studies have implemented value measures that align with the theory of basic human values. These generally support the theoretical argument that self-transcendence and self-enhancement values effect marriage and cohabitation. Thornton, Axinn, and Xie (2007) show that men and women in the United States who prefer career over family postpone marriage and that the effect is stronger for women. Clarkberg, Stolzenberg, and Waite (1995) find that self-enhancement values such as the importance of money and leisure are negatively related to the probability of forming a first union and negatively related to the union being a marriage (instead of cohabitation) with a longitudinal and nationally representative cohort study of high school seniors started in 1972 running until 1986 in the USA. Similar results have been found for fertility. Barber (2001) showed that positive attitudes towards children and childbearing increases marital childbearing, while positive attitudes for career and luxury goods reduce rates of marital and premarital childbearing.⁶

⁶ There are longitudinal studies which examine the effect of job values on marriage. These often measure intrinsic versus extrinsic work values, which roughly translate to Schwarz's growth versus survival distinction. These studies show intrinsic work values are negatively and extrinsic work values are positively related to marriage (Johnson 2001, 2005; Mortimer, Lorence, and Kumka 1986). At face value these results would speak against the currently argued narrative. However, there are two considerations which may prompt a reevaluation. These studies combine two goals identified by Schwartz (1992). That is, intrinsic values combine items on openness to change (using skills, learning) with self-transcendence items (being helpful and working with people). It is therefore unclear what goal focus of intrinsic work values affects marriage. Extrinsic work values are exclusively related to self-enhancement values including items such as pay, steady work, advancement and high regard. But it is unclear to what extent the results from work values literature will generalize. Work values are derived from personal values and may represent instrumental motivations to attain broader personal values. For example, extrinsic work values may be related to marriage because a stable career enables family formation, while pursuing

6.4 Hypothesis

The SDT narrative proposes that individuals choose between interdependence and independence when choosing to cohabit and marry. I hypothesize that the social focused growth value of benevolence is positively related to the probability of marriage (H1). This value's goal is to find regular and intimate close contact. Achievement is likely negatively related to the probability of marriage (H2). This value's goal is to attain social standing through culturally prescribed methods, e.g. labor market success. Additionally, there should be gender differences in these effects. Men value benevolence less on average and in the Netherlands are often the main income providers. The effect of benevolence values on the probability of marriage is therefore likely stronger for men than for women (H3). On the other hand, women face institutional barriers and considerable costs when pursuing a career. Therefore, the effect of achievement values is likely stronger for women than for men (H4).

The SDT narrative proposes that individuals choose between autonomy and social conformity when deciding to cohabit and marry. Marriage is a 'traditional' goal while cohabitation before marriage breaks with tradition. Openness to change is likely negatively related to marriage but positively related to cohabitation (H6) while conservation is likely positively related to marriage and negatively related to cohabitation (H7).

6.5 Data and Methods

The Longitudinal Internet Studies for the Social sciences (LISS) is a representative sample of Dutch individuals who participate in monthly Internet surveys (Scherpenzeel and Das 2010). For the analysis of first marriage and cohabitation I take respondents who are 18 to 40 years of age and who have never been married. The data covers 2008 to 2019. First and second-generation migrants are excluded from the analysis.

LISS panel members respond to modules every month including a household questionnaire, providing monthly information on household status and socio-demographics. Respondents are paid for each module completed but not all respondents are presented with the same modules. Modules are staggered throughout the year. Personal values are measured using the Rokeach

work for intrinsic reasons may delay family formation because these focus on individualistic goals such as career and skill development.

Value Survey (RVS) which is included in the personality module. It was administered in June from 2008-2013 and 2017 but was administered in November in 2015 and 2014. In 2016 the personality module was not fielded due to a lack of funding. These data are merged with the information from the monthly socio-demographic household module and the yearly family and household module. These provide the failure times of marriage and cohabitation. Two other modules provide control variables: the work and schooling and the life history modules.

Due to survey design not all waves of the LISS data provide measurements of personal values. The personality module was administered in a short and long form in 2010, 2012, 2015 and 2018. A short version of the personality questionnaire is administered to all respondents who filled out the RVS in the previous wave. The short version did not include the RVS. About 15% of respondents received the long version of the personality modules in these survey years and filled in the RVS. Of the long form respondents, around 70% were entering the panel for the first time as part of refreshment samples. Two refreshment samples were drawn before the first short personality module was fielded, one in April 2009 and another in January 2010. The 2009 supplement ameliorates the under representation of the elderly (de Vos 2010) while the 2010 supplement over sampled migrants. Further refreshment samples were drawn in 2011, 2013 and 2017. Respondents entering the LISS responded to the long version of the personality module.

The inclusion of the long version respondents is unlikely to bias estimates as these are predominantly from refreshment samples. Nevertheless, I checked the age and educational distributions of the long form respondents who were not part of refreshment samples to that of the short form respondents. Respondents who filled in the long version and originated from recruitment more than one year before the split ballot years are around 300 out of 4000 to 5000 respondents in each wave (2010, 2012, 2015 and 2018). In each wave these respondents are younger and differ slightly in the educational distribution. In 2010 The long version respondents are more often between 15-24 years old (41%) than the short version respondents (10%). This is most likely associated with the overrepresentation of primary school educated (27%) among long version respondents compared to short version respondents (9%). These younger respondents are most probably still in education and have yet to attain secondary diplomas. In 2012, long version respondents who do not originate from the refreshment sample are again much younger. Respondents between 15-44 years old are overrepresented by about

10% points while those over 65 are underrepresented by about 20% points. The educational distribution is similar between long and short version respondents. In 2015 the long version respondents all had a chance to respond to the RVS in previous waves. Again, these 354 respondents are much younger. Those under 44 are overrepresented by about 10% points and those over 65 are underrepresented by about 25% points. Additionally, the distribution of education is also different. There is an overrepresentation of the primary (4%) and the university educated (4%) while there is an under representation of the intermediate secondary educated (10%). The long version respondents in 2018 who are not from the refreshment wave in 2017 are also younger, those between 15-44 are overrepresented by 10% points. The educational distribution is similar, except the intermediate secondary educated are underrepresented by 10% points while the higher secondary educated are overrepresented by 4% points. Again, this is likely connected to the age distribution. Overall, these deviations seem acceptable given the small number respondents who filled out the long version. In sum, response to the RVS in the split ballot years is only partially related to non-response in the previous years and when it is, it is mostly related to age but less so to education.

Discrete event history models require long format data with observations for each time unit at risk per respondent. In the LISS data there are 2304 respondents who are observed as never been married and 18 to 40 years of age. These contribute 8720 observations and 357 marriage events. Due to the survey design 2,610 observations are dropped in total from the waves: 2010, 2012, 2015 and 2018. These respondents were provided a short version of the personality modules in these years and therefore did not fill out the RVS. A further 102 observations are dropped due to incomplete data on the RVS and missing data on the education. The sample for the marriage models includes 2266 respondents (1008 Males and 1258 Females), 6008 observations and 261 failure events. Respondents are observed on average for 2.65 years between 2008-2019.

The LISS data contain 1602 respondents contributing 5554 observations who are never married and not cohabiting with 350 failure events. From these 1694 observations are dropped due to the survey design. A further 62 observations are dropped due to incomplete data on the RVS survey. The cohabitation sample includes 1562 individuals (714 Males, 848 Females) with 3798 observations and 246 cohabitation events. These are observed on average for 2.43 years.

6.5.1 Measurements

The LISS panel uses the Rokeach Value Survey (RVS) to measure respondents' personal values (Rokeach 1973). The measurement and validation of the achievement, benevolence, openness to change and conservation values are described in chapter 4.

Information from the monthly household questionnaire is utilized to measure the month and year of marital and cohabitation status change. Failure times are coded such that personal values are measured before the event in accordance with discrete time history models. For example, personal values were measured in 05/2008 and again in 05/2009. If an individual is married between 05/2008 and 04/2009 their failure time is coded as 2008. The cohabitation event is defined as individuals who are either the household head or partner of the household head and indicate that the household head is living with their partner but were not observed doing so in the previous wave. Additionally, only cohabitations of longer than one year are considered. This qualification makes the cohabitation event comparable to the marriage event. However, it is not possible to observe whether respondents were previously cohabiting.

Marriage before cohabitation is rare, the data yield only 44 events but only 33 events when dropping cases for incomplete data. Marriage before cohabitation will not be considered in this chapter as it is a marginal event and too few cases occur for accurate estimation of coefficients.

Control variables include age, age squared, year of birth, in education dummy, educational attainment, unemployment rate, employment relationship and occupation. These are included as time-varying covariates. Respondents who indicate their main occupation is studying are coded as 1 on the "in education" dummy variable. This social role is normatively perceived to be incompatible with adult roles signified by marriage (Blossfeld and Huinink 1991). Education level is recoded into a three-category variable: primary and lower secondary (vmbo), secondary (havo, vwo, mbo) and tertiary (hbo and wo)⁷. The quarterly seasonally adjusted unemployment rate of individuals aged 25-40 is taken from the Central Bureau for Statistics Netherlands (CBS 2020).

Current employment relationship is coded as permanent, non-permanent (on-call and temporary), self-employed or employer and not employed (students, unemployed, work

⁷ VMBO is pre-vocational education. HAVO and VWO are secondary education degrees which give access to tertiary education. MBO is a secondary vocational education. HBO is higher/tertiary vocational education and WO is university level education.

disability). Of those not employed, 78% are in education. Most non-permanent contracts were temporary contracts (80%) of 29 hours per week, on average.

Occupations were measured by asking respondents to self-assess their current or last job. Occupational groups are presented to respondents with examples: higher academic or independent profession (e.g. architect, physician, scholar, academic instructor, engineer), higher supervisory profession (e.g. manager, director, owner of large company, supervisory civil servant), intermediate academic or independent profession (e.g. teacher, artist, nurse, social worker, policy assistant), intermediate supervisory or commercial profession (e.g. head representative, department manager, shopkeeper), other mental work (e.g. administrative assistant, accountant, sales assistant, family care), skilled and supervisory manual work (e.g. car mechanic, foreman, electrician) semi-skilled manual work (e.g. driver, factory worker), unskilled and trained manual work (e.g. cleaner, packer) and agrarian profession (e.g. farm worker, independent agriculturalist). These are recoded to four categories. The higher occupations are coded as professional and managerial, the intermediate and other mental work are coded as white collar, (un)skilled and agrarian professions are coded as manual⁸. In 2012 the CentERdata institute coded occupational responses into ISCO. These allow, with the aid of employment relation variable (cw121) and the number of employees (cw410), to compare the self-identified occupations to Oesch classes (Oesch 2006). This showed that respondents did self-categorize their skill level accurately but not their work logic. For this reason, I collapse across the supervisory and academic or independent distinction made in the LISS data. Respondents with missing data on occupation are placed in the missing category, 41% of these are students and 45% indicate they have a permanent contract.

6.5.2 Analytical strategy

Providing evidence that personal values affect behavior is notoriously difficult for two reasons. The first problem is reverse causality: behavior may change values. The second is the multitude of contextual and confounding variables. I first discuss how the data and design avoid and guard against reverse causality. Then I discuss the confounding and contextual factors and lastly discuss the use of discrete event history models and model selection.

⁸ The re-coding of agrarian occupations as manual misclassifies some farmers. There were 8 cases where respondents indicated their occupation as agrarian and employment relation as self-employed.

One way to reduce reverse causality bias is to measure the independent variables before the dependent variables. The LISS data provides value measurement before the marriage or cohabitation events occur. The value measures are taken between 0 and 18 months before the marriage or cohabitation event. The changes in the month of administration of the survey causes a time gap of more than 12 months between the 2013 and 2014 survey waves while the omission of the personality module in 2016 creates a longer time gap between the 2015 and 2017 survey. However, measuring values before the event may not suffice. Respondents in the LISS data could have cohabited before and separated. These events may have changed their personal values. The effects of values on cohabitation and the cohabitation survival curves must be read with this possibility in mind. Marriage is a long process that requires planning and deliberation. It is possible that personal values change during this process. Therefore, I also ran models using lagged scores. In these models, personal values have the predicted positive or negative relationship with cohabitation and marriage although most effects are not significant, possibly due to the reduced sample size. Nevertheless, the consistency of the effects provides evidence that the effects presented here are not due to reverse causality.

The relative stability of values also guards against reverse causality. Values change slowly over time due to experience and change in a short time only with large exogenous shocks such as an economic depression or migration (Bardi et al. 2014; Bardi and Goodwin 2011; Lönnqvist et al. 2018; Milfont et al. 2016). The stability of personal values is apparent from correlations between measurement occasions. These show whether individuals change their ranking within the population. A longitudinal study from New Zealand found a high ($r = .60$) rank order stability over four years (Milfont et al. 2016). Similarly, correlations between yearly value measurements in the LISS data range from 0.49 to 0.62 for achievement and conservation values. Benevolence and openness to change fluctuate more, correlation between 2008 to 2019 range from 0.30 and 0.42. These correlations are likely lower than those reported earlier due to attrition, resampling and the longer time span (10 years) of the panel. Within person change is also limited as shown in chapter 5. Fixed effects regressions show that respondents lower the importance rating of values by 0.01 to 0.03 standard deviations with each increase in age. Fixed effects regressions also show that the change from never married to married state significantly decreases the importance of achievement values when it is modeled as a contemporaneous effect but that it is not significant when modeled with a one-year lag. These results indicate that personal values are stable and do not change in anticipation to marriage.

A second problem with estimating the effects of values on behavior is the large number of confounding variables. In this case social class and origins are important confounding variables. Education, occupation and social class affect openness to change and conservation values (Kohn 1989) and the timing and probability of marriage (Liefbroer and Corijn 1999; Mooyaart and Liefbroer 2016). Additionally, contextual effects such as the state of the economy may change values (Sortheix et al. 2019). Therefore, I control for respondent's education, occupation and the macro level unemployment rate. However, social origin cannot be controlled for. Questions on fathers and mother's education and occupation were asked only in 2012 and 2013. There is no data on social origins for most respondents due to resampling and a 12% yearly attrition rate. Nevertheless, models including father's occupation show similar effects as those presented here. A limitation is that the variables controlling for contextual and socio-economic factors lack detail. The results presented here can therefore only be interpreted as tests of the theoretical framework discussed earlier. That is, as establishing a phenomenon through associations and are in no way causal relationships.

To estimate the hazard ratios of marriage and cohabitation, discrete time event history models are constructed using the complimentary log-log link and cluster robust standard errors. One set of models uses marriage regardless of previous cohabitation status as outcome. Respondents are at risk of marriage from the year they turn 18 and when they indicate never being married. Respondents exit the risk pool once married or when they turn 40. The model on marriage does not control for cohabitation status. Including cohabitation status may act as a collider variable (Elwert and Winship 2014). The second model uses un-married cohabitation as outcome. Respondents are at risk when indicating they do not live with a partner, are at least 18 years old and have never been married. Respondents exit the risk pool once cohabiting or when they turn 40. The age of 40 is selected as the end of the risk period as the trade-off between career and family become less salient afterwards. At age 35 career trajectories start to level out (Wolbers et al. 2011) while it is also the beginning of women's fertility decline.

Discrete time event history models are sensitive to the specification of the baseline hazard (Cleves, Gould, and Marchenko 2016). These two considerations require testing several models. The baseline hazard is not constant for the marriage or cohabitation models (see Figure 2 and 4) but takes the form of a parabola. A continuous variable (age) representing the risk time under observation and its square are included to model the baseline hazard. An interaction

between age and gender is included as it is well known that women marry at a younger age than men. The interaction between covariates and duration mean I estimate a non-proportional hazard rate model. Models were chosen based on Chi² tests of overall model fit, the AIC and BIC. These show the observed time at risk, its square and an interaction with gender improve model fit. Higher order polynomials of the observed time at risk were also tested but were discarded on the basis these overfit the data. We have no theoretical basis to believe marriage or cohabitation hazards would increase again later in the life-course. I also tested whether the effect of values is constant across time. Each value measure was interacted with time and with gender in separate models. These interaction terms did not improve model fit.

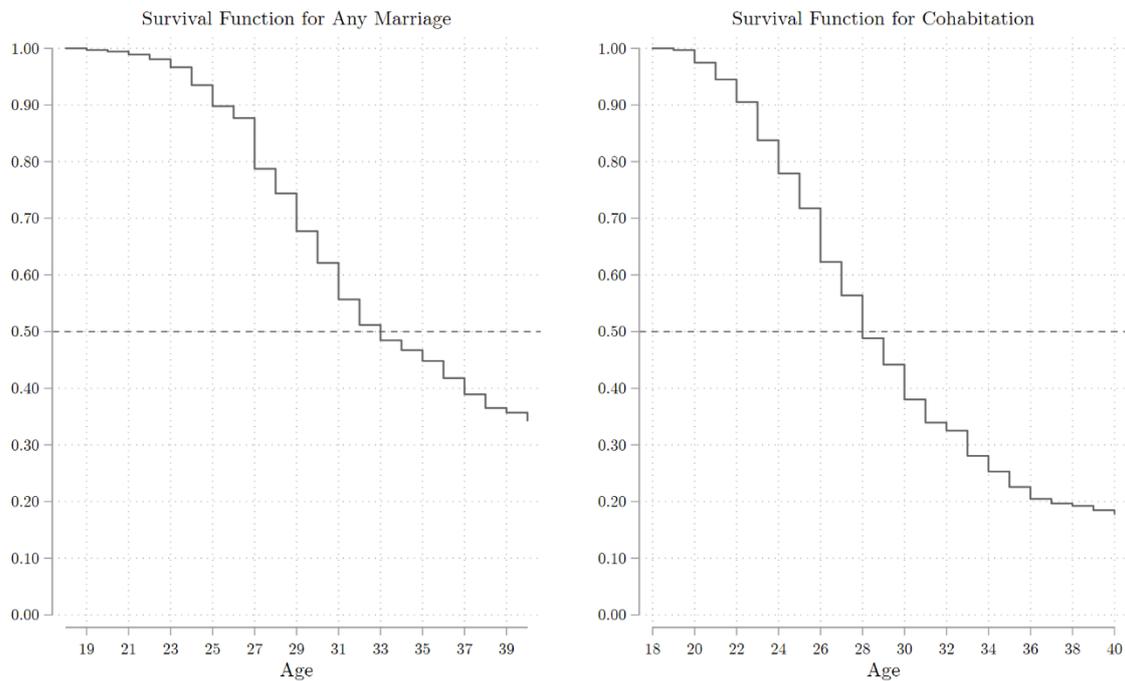
6.6 Results

Below the survival and hazard curves of marriage and cohabitation are discussed. The latter are differentiated by the importance respondents attribute to each of the four personal values. The descriptive statistics for the variables used in the event history analysis for the marriage and cohabitation sample can be found in appendix C.

The left panel of Figure 6.1 shows the survival curve of marriage. The median age at first marriage in the sample is 33. On average women get married at 32 while men do so at 36. The age at first marriage in the LISS data are higher than ages reported with other data (Billari and Liefbroer 2010; Liefbroer and Dykstra 2000). However, those data are from older cohorts born in the 1960s and 1970s while the current sample was born, on average, in 1985. Additionally, the panel started in 2008, which marks the beginning of the recession, which may cause a delay in the timing of marriage.

The right panel of figure 6.1 shows the survival curve of cohabitation. These refer to all individuals at risk of cohabitation at the observed time period regardless of previous cohabitation experiences. The median age cohabitation is observed is 28 on average. This is unlikely to be the first cohabitation experience. Billari and Liefbroer (2010) report that the median age of leaving the parental home is 20.1 in a 1970s cohort of women in the Netherlands and that half of individuals form their first cohabiting union at age 22.3. Liefbroer and Dykstra (2000) likewise report lower educated men form their first cohabiting union at age 24 for and the higher educated at age 26. Lower educated women do so at age 21 and higher educated women at 24. The individuals observed to start cohabitation in the LISS data may have cohabited before but have not married.

Figure 6-1 Survival Functions for Any Marriage and Cohabitation



The hazard rates of marriage are displayed in Figure 6.2 by the importance given to each value and gender. Respondents were categorized into terciles within each wave. The highest and lowest ranking terciles are shown in Figure 6.2. There are noticeable differences in hazard rates between levels of importance and these vary by gender. As expected, the hazard rate for men who value achievement is lower than their counterparts. Against expectations, men who attribute high importance to benevolence initially have a lower hazard compared to men who value benevolence less. The ranking reverses at age 33. Afterwards, men who highly value benevolence have a higher hazard rate than those that do not. Women’s hazard rate is the same regardless of the importance attributed to benevolence, but the hazard decreases less past age 30 when benevolence is important. These patterns support the hypothesis that individuals who value relationships and find labor market success less important focus their energies on building relationships. However, the timing of the peaks suggests that those who value relationships do delay partnership formation. Perhaps because it takes them longer to find a stable economic position.

The associations between marriage and conservation values are contrary to those hypothesized by the SDT. The hazard rate of marriage is higher for women who highly value openness to change. Men who attribute low importance to conservation have a higher hazard rate of

marriage while there is no difference in the hazard rate of women with high or low conservation values. The hazard rate of men who value openness to change is like those who do not but the former peak later. Overall, these trends run counter to the SDT narrative which would predict conservation to predict marriage and openness to change to be negatively associated with it. One explanation is that these hazard rates do not distinguish those who cohabit before marriage and those who combine the events as prescribed by nuclear family tradition.

Figure 6-2: Hazard Rate of Any Marriage by Importance of Value and Gender

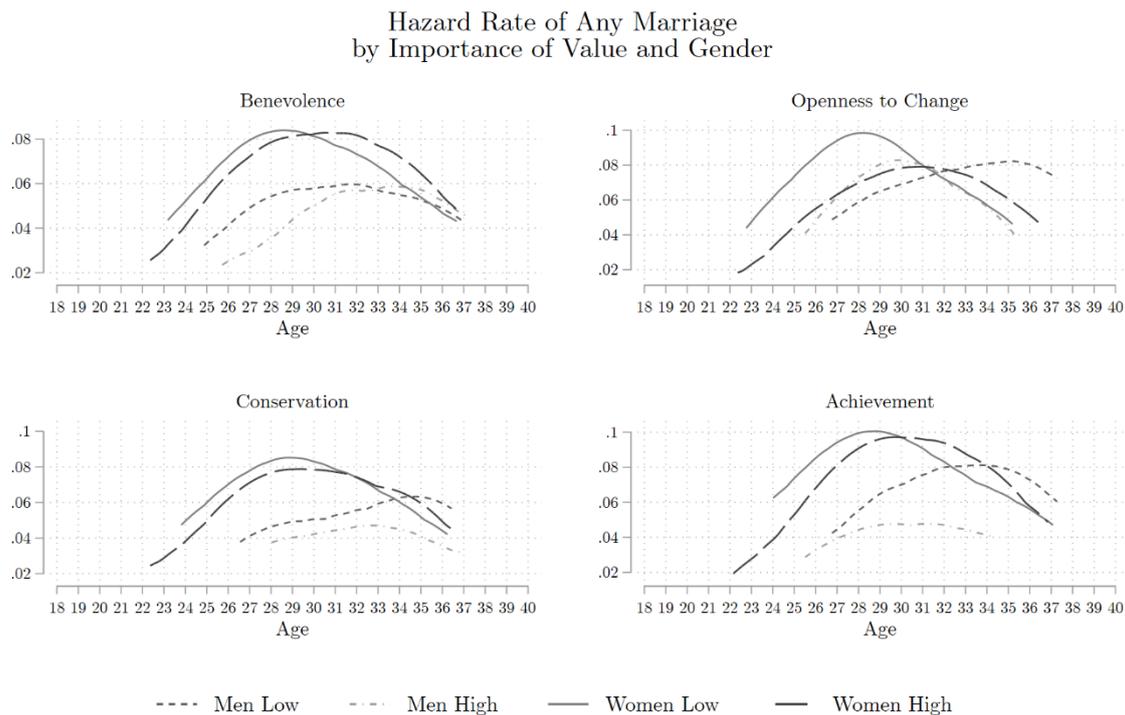
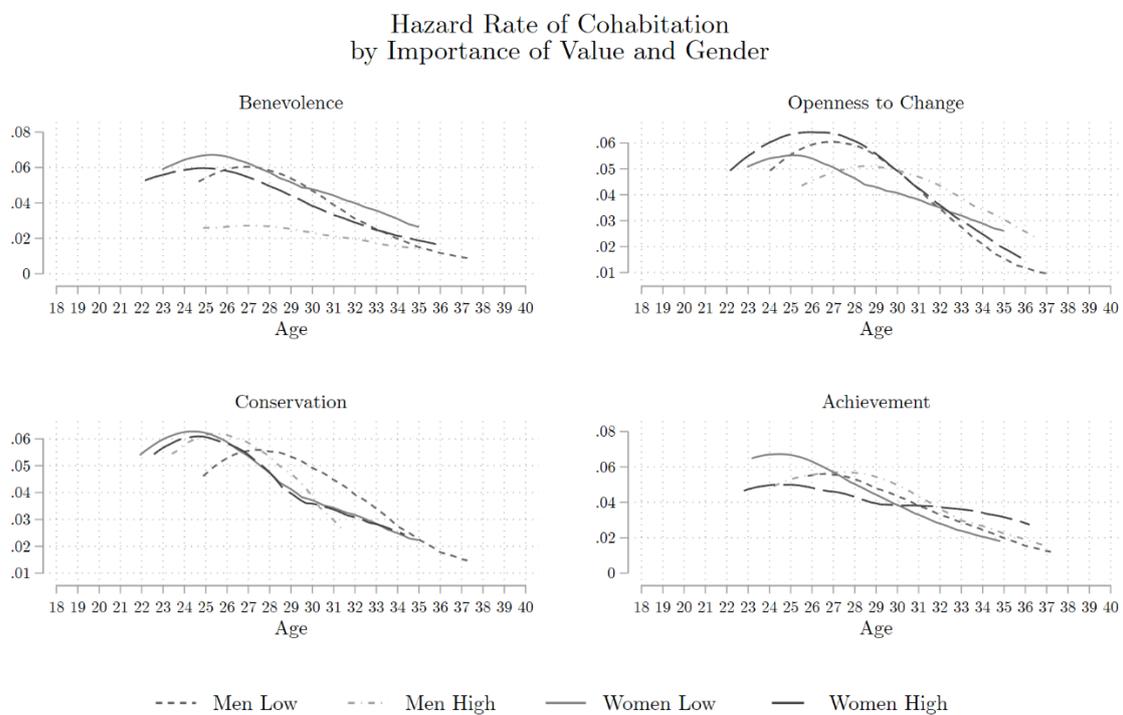


Figure 6.3 shows the hazard rate of entry into cohabitation by the importance of the four values and gender. Overall, the associations run counter to the hypothesis. Men who attribute high importance to benevolence have a substantially lower hazard rate. There are similar but smaller differences for women. There are small differences between men who find achievement important versus those who do not in the hazard rate of cohabitation.

Women who value achievement have a lower and almost stable hazard rate of cohabitation compared to women who do not value achievement. While the hazard rate of women who do not value achievement is initially much higher, it drops below the hazard rate of achievement-oriented women past age 30. These associations are difficult to interpret as the theory only predicts mean level differences.

The associations between cohabitation hazard rate, openness to change and conservation values of do not support the hypothesis of the SDT narrative. Women who value openness to change have a higher hazard rate than those who do not, however the opposite is true for men. The hazard rate of women who value conservation is almost identical to women who do not. Men who value conservation have a higher hazard rate of cohabitation and peak earlier than men who do not value conservation. Overall, the associations between women’s openness to change and men’s conservation values and cohabitation run counter to the predictions by the SDT narrative. Only the association between men’s openness to change values and cohabitation support the SDT narrative.

Figure 6-3 Hazard Rate of Cohabitation by Importance of Value and Gender



6.6.1 Regression Results

Table 6.2 shows the hazard rates from the discrete event history models. A hazard ratio higher than 1 indicates an increase in the hazard rate with a one standard deviation increase in the independent variable. We first turn to the predictions made by the SDT narrative. Against expectations, conservation does not have a significant effect on marriage or cohabitation. Likewise, openness to change does not have a significant effect on the hazard rate of cohabitation. However, as predicted by the SDT narrative, openness to change has a negative and significant effect on the hazard rate of marriage. The original predictions of the SDT are

therefore partly borne out. Valuing autonomy is associated with lower hazard of marriage. However, the opposing value of conformity is not associated with a higher marriage hazard.

Next, we turn to the benevolence and achievement values. Benevolence does have a significant positive effect on the hazard rate of marriage. Benevolence does not significantly affect the hazard rate of cohabitation. Against expectations, achievement values have no significant effects on marriage or cohabitation. Turning to the gender differences in the effects of benevolence and achievement. Neither benevolence nor achievement values significantly interact with gender. However, running separate models by gender show that only men's openness to change and benevolence values have a significant effect on marriage (appendix C). These results partly corroborate the theoretical arguments made earlier that we must separate self-transcendence and self-enhancement values from openness to change and conservation values. That is the importance of social relationships is associated with the hazard rate of marriage independently of the pursuit of autonomy.

Table 6-3: Discrete Time Event History models for Any Marriage and Cohabitation

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Marriage			Cohabitation		
Age	1.44*** (0.11)	1.44*** (0.11)	1.44*** (0.12)	1.52*** (0.10)	1.52*** (0.10)	1.52*** (0.10)
Age Squared	0.99*** (0.00)	0.99*** (0.00)	0.99*** (0.00)	0.98*** (0.00)	0.98*** (0.00)	0.98*** (0.00)
Conservation	0.97 (0.08)	0.97 (0.08)	0.97 (0.08)	1.04 (0.09)	1.04 (0.09)	1.04 (0.09)
Benevolence	1.31*** (0.14)	1.31*** (0.14)	1.39** (0.18)	1.02 (0.09)	1.02 (0.09)	0.99 (0.11)
Achievement	0.90 (0.08)	0.86 (0.10)	0.90 (0.08)	0.89 (0.08)	0.91 (0.13)	0.89 (0.08)
Openness to Change	0.78** (0.08)	0.78** (0.08)	0.78** (0.08)	1.01 (0.10)	1.01 (0.10)	1.01 (0.10)
Education (ref. lower)						
middle	0.98 (0.23)	0.98 (0.23)	0.97 (0.23)	0.94 (0.21)	0.94 (0.21)	0.94 (0.21)
higher	1.14 (0.26)	1.15 (0.26)	1.14 (0.26)	1.30 (0.30)	1.30 (0.30)	1.30 (0.30)
Employment Relationship (ref. Permanent Contact)						
Non-permanent	1.22 (0.23)	1.22 (0.23)	1.22 (0.23)	0.90 (0.20)	0.90 (0.20)	0.90 (0.20)
Self-Empl/Employer	0.49* (0.19)	0.49* (0.19)	0.49* (0.19)	0.64 (0.25)	0.64 (0.25)	0.63 (0.25)
Not Employed	0.58**	0.58**	0.58**	0.75	0.75	0.75

Table 6-3: Discrete Time Event History models for Any Marriage and Cohabitation

	(1)	(2)	(3)	(4)	(5)	(6)
	Any Marriage			Cohabitation		
Year of birth	1.00*** (0.00)	1.00*** (0.00)	1.00*** (0.00)	1.00*** (0.00)	1.00*** (0.00)	1.00*** (0.00)
Occupation (ref. Professional/Managerial)						
white collar	0.81 (0.15)	0.81 (0.15)	0.81 (0.15)	0.94 (0.21)	0.94 (0.21)	0.94 (0.21)
Manual	0.58** (0.16)	0.58** (0.16)	0.58** (0.16)	0.87 (0.24)	0.87 (0.24)	0.87 (0.24)
Missing	1.02 (0.21)	1.02 (0.21)	1.02 (0.21)	0.72 (0.17)	0.72 (0.17)	0.72 (0.17)
Unemployment Rate	1.07 (0.05)	1.07 (0.05)	1.07 (0.05)	1.05 (0.05)	1.05 (0.05)	1.05 (0.05)
In Education	0.23*** (0.11)	0.23*** (0.11)	0.23*** (0.11)	0.96 (0.29)	0.97 (0.29)	0.96 (0.28)
Female	2.27** (0.93)	2.25** (0.92)	2.25** (0.92)	3.01*** (0.91)	3.04*** (0.92)	3.04*** (0.92)
Female x Age	0.95* (0.03)	0.95 (0.03)	0.95* (0.03)	0.93*** (0.02)	0.93*** (0.02)	0.93*** (0.02)
Female x Achiev.		1.07 (0.16)			0.95 (0.16)	
Female x Benev.			0.90 (0.13)			1.06 (0.16)
Observations	6,008	6,008	6,008	3,798	3,798	3,798
Log Likelihood	-968.2	-968.1	-967.9	-845.8	-845.7	-845.7
events	261	261	261	246	246	246
AIC	1974	1976	1976	1730	1731	1731
BIC	2102	2110	2110	1848	1856	1856

Cluster Robust S.E. in parentheses *** p<0.01, ** p<0.05, * p<0.1

6.7 Discussion

The SDT narrative contends that rising self-developmental orientations such as higher openness to change and lower conservation values play a part in the delaying marriage, lower fertility, increased divorce and cohabitation observed in the 20th century (Lesthaeghe 2010; Van de Kaa 1987). I argued that the authors of the SDT narrative have equated individualism with autonomy thereby combining two separate value orientations. The Theory of Basic Human Values contends that there are four higher order values, each based on different needs (Schwartz 1992). Applying this value theory to the SDT narrative, I argue we must separate the trade-off between autonomy and social conformity from the trade-off between interdependence and independence. Both trade-offs feature in the SDT narrative but only the

first is captured by its value measures. The SDT narrative argues and has empirically shown that the endorsement of openness to change values leads individuals to autonomous decision making which may lower marriage and raise divorce rates by bringing marriage into competition with other goals (Lesthaeghe and Moors 1995; Surkyn and Lesthaeghe 2004a). However, the relative costs and benefits of partnership decisions are based on self-enhancement and self-transcendence values. Individuals derive utility from expressing these values when choosing to cohabit or marry. The SDT narrative has not recognized or empirically tested the relationship between these values and demographic behavior.

In this chapter I tested the predictions made by the SDT narrative using discrete event history models and incorporated value measures constructed using the theory of basic human values. Four values were selected for their relevance to the SDT narrative. Openness to change and conservation values represent the trade-off between social conformity and autonomy. Benevolence and achievement values capture the trade-off between interdependence and independence. As expected, the values of benevolence and openness to change are associated with marriage. Benevolence was found to have a positive effect on the hazard rate of marriage. Openness to change was found to have a negative effect on the hazard of marriage. There were no effects of personal values on cohabitation.

These results partly corroborate the SDT narrative. The pursuit of openness to change values includes autonomy which is associated with a lower the hazard rate of marriage. The SDT narrative argues that the pursuit of autonomy brings marriage into competition with other goals and therefore individuals delay or forgo marriage. However, the SDT narrative also contends that individuals who value social conformity make marriage a central goal in life. The results presented here do not support this argument. Conservation values have no effect at the individual level. This could be due to the Dutch context which lacks strong social norms on the timing and sequencing of household formation. Alternatively, it could be due to the modeling choices. I could not model the combination of marriage and cohabitation as a separate event. This ordering of events resembles the nuclear family tradition most faithfully.

The results presented here also partly corroborate the theoretical argument made in this chapter. I argued the SDT narrative has not properly measured the second trade-off it identifies, that between interdependence and independence. This trade-off cannot be captured by openness to change and conservation values but must be measured by self-transcendence

and self-enhancement values. In this chapter I used two sub-values from these higher order value measures: benevolence and achievement. The results shown here indicate that the importance individuals attach to benevolence is associated with the hazard rate of marriage. However, the importance of achievement values was not related to the hazard rate of marriage. These results therefore support the utility of distinguishing between value measures.

The SDT literature has been criticized for its silence on gender (Bernhardt 2004; Zaidi and Morgan 2017). The expression of self is not gender neutral because men and women face different tradeoffs. To this argument we may add that gender also directly affect values (Borg 2019; Schwartz and Rubel 2005). Men value self-enhancement more than women and women value benevolence more than men. Thus, with different trade-offs and values, I hypothesized an interaction between gender and benevolence and achievement values. The results presented here did not show any gender differences when formally testing the interaction. However, the effect of benevolence and openness to change on marriage are significant for men and not significant for women when genders are modeled separately. These are unexpected results and may relate to the high costs for women to combine work and family in the Netherlands. That is, women are constrained in their choices and unable to express their values. Cross-national research on this would be able to examine how institutional environments moderate the relationship between personal values and demographic behaviors.

In its original form, the SDT narrative commented on the rise of cohabitation as an expression of anti-authoritarian attitudes. This may no longer be valid as the difference in the effects of values on cohabitation and marriage and the null effects of conservation values show. The significant effects of benevolence on marriage and the null findings for cohabitation indicate these events have different meanings. Additionally, conservation did not have a significant effect on marriage or cohabitation. These results indicate that cohabitation does not have a strong relationship to value expression. Indeed, previous research finds that cohabitation has several meanings: it can signal low commitment but can also be a trail period before marriage (Keizer and Hiekel 2015). A second explanation is that social norms and cultural narratives on marriage have changed to such an extent that individuals no longer see cohabitation as anti-authoritarian expressions. Indeed, cohabitation followed by marriage and childbirth is the new normative standard (Feijten and Mulder 2002; Mills 2004; Thomson, Winkler-Dworak, and Kennedy 2013).

One main claim of the SDT is that the current levels of low fertility and marriage are irreversible because the value shift is an exogenous shock (Zaidi and Morgan 2017). This is a point of disagreement between structural and ideational explanations of the second demographic transition. However, the theory of basic human values and current psychological theories on self-development imply this is not the case. Self-actualizing values include interpersonal relationships. On the other hand, the results shown here indicate that the rising concern for autonomy does have a depressing effect on marriage. Therefore, it is unclear what the overall effect of self-developmental value orientations is likely to be in the future. It is possible that a value change over the life-course also contributes to the later age of marriage. Benevolence values are stable over the life-course while openness to change and achievement values decrease over the life-course (Bengtson 1975; Dobewall et al. 2017; Konty and Dunham 1997; Milfont et al. 2016). Thus, although the wealth of a nation may increase the importance of both of all growth values, value change over the life-course may eventually prioritize union formation.

There are some limitations to the analysis due to the data. First, discrete time event history models are not optimal in studying timing of life course events. Unfortunately, the panel data used does not include the month of birth or the exact month of entry into marriage and cohabitation. The estimates of the timing and median age at marriage and the effect of values on marriage may therefore be inaccurate. Secondly, due to the low occurrence of direct marriage this event was excluded from analysis. This would allow further testing whether the values of openness to change and conservation influence the type of union formation individuals choose. Third, the occupational control variable was of low quality and was missing for 30% of cases, however 41% of these missing cases are students who may not have paid work. Fourth, the value measures are based on the RVS which is the fore runner of the Schwartz Value Survey and the Portrait Value Questionnaire. The value measures constructed from the LISS data are therefore not of the highest quality. Particularly the openness to change measurement is weakly related to its corresponding value measures in the PVQ (see Chapter 4).

6.8 Conclusion

In this chapter I argued that personal value orientations are not sufficiently distinguished in the SDT literature (Lesthaeghe 2010; Surkyn and Lesthaeghe 2004; Zaidi and Morgan 2017). In particular values that pertain to self-development and individualism are grouped together.

Current psychological theories of self-development and personal values indicate that we must distinguish between inter and intrapersonal aspects of self-development. The SDT currently only addresses the intrapersonal in its value measures, that is the opposition between openness to change and conservation values. The interpersonal aspect of self-development is associated with self-transcendence and self-enhancement values. These values capture the trade-off between interdependence and individualism. The SDT narrative identifies this tradeoff in theory but does not capture it in its value measures. I constructed value measures using the theory of basic human values (Schwartz 1992) and showed that benevolence and openness to change values are independently related to marriage in the Netherlands. It is misleading to characterize all self-developmental values as a partial cause of lower marriage rates. Rather, the SDT narrative should include self-transcendence and openness to change values to capture both the trade-offs it has identified in demographic behavior.

Chapter 7 Who Does What and Why: The household division of labor and gender encoded motivation

Women's contribution to household labor is almost double that of men (Bianchi et al. 2000) so that, if employed, women end up with a double shift (Hochschild and Machung 2003). Inequalities in household labor are often attributed to gender ideology, the set of norms and stereotypes which affect behavior and bias evaluations (Davis and Greenstein 2009). In recent decades, gender ideologies have become more egalitarian, men have increased their contribution to household labor, women have entered the labor market and the total time spend on household labor has fallen. These factors contributed to a reduction in the average differences in household labor between men and women over successive cohorts (Bianchi et al. 2000; Skopek and Leopold 2019) but men still do less household labor than women, net of time constraints. The persistent gender gap in household labor and areas of public life have led scholars to declare a stalled and uneven revolution (Charles and Grusky 2004; Cotter, Hermsen, and Vanneman 2011; England 2010).

Some proponents of the stalled and uneven gender revolution argue a specific type of gender stereotype is to blame, one that essentializes men and women as naturally different. These are especially harmful because they are internalized and expressed as identity (Charles and Bradley 2009; Charles and Grusky 2004; England 2010). Such stereotypes are often assumed to be part and parcel of 'traditional' ways of looking at gender. However recent studies show gender ideologies come in many packages, some egalitarian gender ideologies include gender essentialist stereotypes and others do not (Grunow, Begall, and Buchler 2018; Knight and Brinton 2017; Scarborough, Sin, and Risman 2019). When gender norms are measured as a unidimensional construct these differences are overlooked. This chapter improves over previous studies by dissecting the unidimensional construct of gender ideology and measures each partner's (his and her) attitudes on men's roles, women's care responsibilities and women's essentialist characteristics.

The second contribution this chapter makes is the measurement of gender identity. Gender is more pervasive than norms. Gender is a multilevel construct that exists at a macro level - as cultural ideals and norms, and also exists at the individual level - as identity - both are supported through individual's behaviors and interactions (Ridgeway 2009; West and Zimmerman 1987). In this chapter, I move beyond the usual way of measuring gender as a

normative construct and examine whether gender identities contribute to inequalities in the division of household labor. I argue that gender identity is reflected in the personal values of men and women and that the application of values is gendered.

The following section of the chapter outlines the three most often used perspectives in the literature on the household division of labor. Following that, the gender perspective is expanded upon, focusing on identity. Then I summarize theory on personal values and formulate hypothesis on the relationship between household labor and the personal values of conservation, openness to experience, self-transcendence and self-enhancement for men and women. These hypotheses are tested by fitting between effects models on Dutch data from the longitudinal internet study for social sciences (LISS), examining how differences in personal values and normative beliefs impact the division of ‘female’ typed and ‘male’ typed household tasks. I show that men and women relate differently to household tasks. Women’s contributions to household tasks are related to their gendered identities, that is, women’s personal values are related to the division of household labor. In contrast, men’s personal values are not significantly related to their contribution to household labor, however their normative beliefs on gender are. Finally, I discuss the implications of these findings for our understanding of gender inequalities.

7.1 Theoretical Perspectives on the Division of Household Labor

The division of housework is generally studied from three perspectives: time availability, exchange (dependence, bargaining, and social exchange) and gender (doing gender and gender deviance neutralization) (Bittman et al. 2003). In this section I briefly summarize these perspectives and highlight the motivations ascribed to men and women and review recent developments and critiques.

Time availability is a rational choice perspective (Blood and Wolfe 1960). Men and women are assumed to have a shared goal: to do the household labor within the 24 hours available. Couples also have other responsibilities outside the household, such as paid labor. There are additional factors which add more household labor, such as young children. The time availability perspective argues that men and women will divide the household labor proportionally depending on the amount of time they have available, given constraints. Women do more household labor, according to this perspective, simply because they do less paid work on average. The time availability perspective finds consistent support, women and men do less

household labor when they work more hours (Bianchi et al. 2000; Grunow 2019; Hook 2010; Sayer 2016). However, partners clearly do not divide household labor proportionally; women continue to do almost twice as much household labor than men, net of time constraints on average (Bianchi et al. 2000; Cunningham 2007; Shelton and John 1996), over the life course (Leopold, Skopek, and Schulz 2018; Skopek and Leopold 2019), on the weekends (Hook 2017) and when unemployed (van der Lippe, Treas, and Norbutas 2018). Moreover, it is likely that gendered choices over the life course influence the time men and women spend in the labor force and at home (Fauser 2019; Gough and Killewald 2011). The time availability perspective explains some differences in men and women's contribution to the household labor, but gender inequalities persist.

Exchange theories argue that household labor is an unwanted task that each spouse avoids (Molm and Cook 1995). The couple negotiates who will do the household labor. The relative resources of each spouse determine power in negotiating who does the dishes. In the breadwinner-homemaker family model, husbands are the primary contributors to the household income and therefore the wife is left with the household labor. The exchange theories have found mixed support (Gupta 2007; Sullivan and Gershuny 2016). Recent studies have reframed this perspective into an "autonomy model", as evidence points to the importance of women's absolute resources instead of their relative resources (Gupta 2007; Sullivan and Gershuny 2016). These authors argue that it is not relative resources that matter, but the autonomy that women gain from their own resources. Absolute resources allow women to make credible threats of divorce, to decide how to spend the income and to be self-sufficient. Nevertheless, these studies find a gendered power imbalance, in that men's and women's resources do not equally affect the division of household labor. Only changes in women's human capital effect the division of household labor.

Lastly, the gender perspective argues that men and women perform their gender through household labor (Berk 1985; Hochschild and Machung 2003; West and Zimmerman 1987). West and Zimmerman (1987) argue that individuals are categorized into a sex category based on appearance and behavior and that we assume individuals have corresponding – often biological - traits. Furthermore, each person is held accountable by others to display the traits that relate to their sex-category in any interaction. The performance of these traits is gender; it is the management of appearances which correspond to normative concepts of the specific

sex category. Household tasks are constructed as being either feminine or masculine. By doing these tasks, spouses display and affirm their own and their partner's gender. A stronger version of this perspective is gender deviance neutralization, which argues that when women do paid work or earn more than their partner, they compensate for their deviance from gender roles by doing more household labor than their spouse. However, this perspective has been shown to rely on model mis-specification or confined to couples where men are un-employed (Gupta 2007; Sullivan 2011). As a general explanation, gender deviance is unsuitable. Nevertheless, it supports the utility of the 'doing gender' perspective as it highlights specific contexts where gender relations dominate the division of household labor.

More generally, research shows gender norms of men and women matter in dividing the household labor (for a review see Davis and Greenstein 2009; Sullivan, Gershuny, and Robinson 2018). That is, the norms of both partners matter (Evertsson 2014; Nitsche and Grunow 2016; Poortman and Van Der Lippe 2009) and norms may also interact. One partner may support the other's behavior when it conforms with their own gender norms but restrict the other's behavior when it does not (Khoudja and Fleischmann 2015, 2017; Nitsche and Grunow 2018). In this chapter we will examine the effects of his and her gender norms on the division of household labor.

The specific content of gender norms is an additional consideration. Studies often conceptualize gender norms as a unidimensional construct from traditional to liberal egalitarian. The traditional norms endorse male primacy, separation of paid and unpaid work and natural differences between genders. Liberal egalitarian norms endorse men and women's joint contributions to paid and unpaid work and reject male primacy. However, the normative conceptions of men's and women's role in care, the household and the labor market as well as essentialist stereotypes can be combined in different ways. Empirically, several distinct combinations are found in Europe and the U.S.A. (Grunow et al. 2018; Knight and Brinton 2017; Scarborough et al. 2019). These studies find two classes correspond to the traditional versus egalitarian poles and other classes which combine endorsement or rejection of essentialist characteristics, women's normative care responsibilities and normative prescriptions (or lack thereof) on joint or separate spheres. Furthermore, these studies show the archetypical traditional views on gender have declined considerably while different versions of egalitarianism proliferate. To address this multi-dimensionality, this study includes norms

on men's role within the household, essentialist conceptions of women as care providers and norms on the compatibility of care and paid labor.

Although gender norms affect the division of household labor, gender theories argue that gender affects behavior through individual and internal processes as well. West and Zimmerman (1987) argue men and women affirm their gendered *identities*. Additionally, essentialist stereotypes may reproduce gender through self-expression of gender biased assessment of competence (Cech 2013; Charles and Bradley 2009). In the next section I will argue that personal values can capture this self-expressive mechanism.

7.2 Gendered Identities and Self-expression

Ridgeway (2009) argued that the 'doing' of gender shapes more than interpersonal interaction. As gender is a primary frame through which we interpret any interaction, it changes how we are expected to play any role. That is, because we assume the sex-category of an individual and interpret whatever they do through a gendered lens, we apply different standards to each gender's behavior. In this way, assumed traits of a sex-category create expectations in alignment with normative conceptions of gender, thereby biasing perceptions, and evaluations. Gender will influence evaluations of others depending on how closely the situation reflects an individual's gender (Callero 2014; Ridgeway 2014). Moreover, individuals know their actions are interpreted through a gendered lens and will take these criteria into account when behaving (Ridgeway 2009; Ridgeway and Correll 2004). These biases also affect our self-concepts and self-evaluations. For example, male high school students in the USA rate their competency in math higher than women, even when controlling for math test grades (Corell 2004). Gender biases our perceptions and behavior to fit a normative and shared interpretive frame but also shapes self-assessments and self-concepts outside of conscious awareness.

Coupled with gender biases in cognition, the post-industrial preoccupation with self-expression adds another mechanism for the reproduction of gender. Individuals in western post-modern societies are often expected to follow their own interests and to make choices that are self-reflexive (Giddens 1991). These choices are not seen or experienced as gender; however, they inadvertently reproduce the gender structure of our societies (Cech 2013; Charles and Bradley 2009; Folbre 2012). Systematic gender biases create disparities in the choice of field of study and occupation (Alon and DiPrete 2015; Cech 2013; Charles and Bradley 2009). Household tasks are no exception (Coltrane 2000; Gershuny 2003). Tasks are perceived to be more suitable

for one gender depending on how gender stereotypical attributes correspond to the skills needed for the task (Poortman and Van Der Lippe 2009). Childcare and laundry are attributed as ‘female’ while odd jobs and financial administration are ‘male’ tasks, while cooking, grocery shopping and vacuuming are ambiguous. Subsequently these tasks present ways to “do gender” but are also differentially performed through gender biased perceptions of competence and preference (Fauser 2019; Grunow and Baur 2014; Poortman and Van Der Lippe 2009).

Considering the above, personal values are an effective way to access the gendered conception of self, as personal values are internalized preferences shaped by our environment. Indeed, one study found dual earner couples who value openness to change divided the household labor more equally in a longitudinal analysis of 197 dual earner couples residing in the USA in the mid-1990s (Klute et al. 2002). In the following section I further elaborate how personal values relate to gender, ending the section by postulating how men and women’s values may be associated with specific gender typed tasks.

7.3 Personal values and Gender Expression

Gender shapes behavior through values using two separate pathways. First gender shapes values due to its effects on need fulfilment and its effects on cognition. Men and women have, on average, different means, and constraints to fulfil similar needs in similar contexts. Additionally, men and women receive different information about themselves from interaction due to gender biased cognition. As a result, men value person focused values such as social status and stimulation more than women while women value social focused values such as social norms and relationships more than men (Schwartz 2015; Schwartz and Rubel-Lifschitz 2009). Over time, a stable value system emerges which reflects identity and the social roles we play (Hitlin 2011). Second, gender shapes the relationship between values and behavior. Values are not always active in cognition; they require a cue (Hanel et al. 2017). These cues are value instantiations – the degree to which a concrete behavior represents an abstract value concept. The stronger the perception that a behavior represents a value, the stronger the relationship between the importance of the value and the behavior. In the context of a household, doing the housework are clear examples of “doing gender” as tasks are gender typed.

Household labor can be imagined as an act of care for close others (self-transcendence) or as fulfilment of socially and traditionally prescribed duties (conservation). On the other hand, attaining social status requires paid labor (self-enhancement). I therefore expect self-

transcendence values to be positively and self-enhancement values to be negatively related to contribution to household tasks (H1). Furthermore, I expect that men and women will also differ in their relationship to specific tasks. The extent to which men and women endorse openness to change or conservation values impacts their beliefs on the importance of following norms and tradition. Men and women who endorse conservation are likely to stick to traditional division of labor – that is, men doing ‘male’ tasks and women do ‘female’ tasks (H2). Men and women who endorse openness to change are likely to do more of the opposite gender-typed task (H3).

Social norms are expected to have independent effects on the division of household labor. Egalitarian and essentialist norms may have counteracting effects on the division of household labor. I expect the effect of men and women’s beliefs on responsibilities of men in the household will be positive (negative), for female (male) typed labor (H4), while the effect of men and women’s normative beliefs in gender essentialism and their support for separating paid and care work will have a negative (positive) for female (male) typed tasks (H5).

7.4 Data and Methods

The LISS modules used in this chapter include: Family and Household, Work and Schooling, Personality and Politics and Values. Couples were identified using the position in household variable and household identification number. Only respondents who indicated being the household head or the un/wedded partner are included in the sample. Other family members, boarders and housemates are excluded from the analysis. All members of a household are eligible to answer LISS questionnaires, thus, the LISS data includes information for both partners. Additionally, the sample was restricted to respondents aged 20-65.

There were some issues with the timing of modules which caused independent variables to be measured after the dependent variables. In all waves the independent variables from the personality module are asked in June, while the dependent variables from the family and household module were fielded in March. Therefore, independent variables from the personality module are lagged. These include all the personal value measures. However, after 2013 the Personality module was fielded from November and from 2015 onward the family and household module were fielded in September. Additionally, the personality module was not asked in 2016 due to funding issues within the LISS panel. Therefore, only waves from 2008 to 2014 could be used as these preserve the temporal ordering of the modules. Information on

the household division of labor come from the family module and are taken from waves 2009-2014 while the personal value items in the personality module come from waves 2008-2013. This preserve the temporal ordering of measurement times for both independent and dependent variables.

7.5 Measures

7.5.1 Dependent Variables

Household tasks are divided into ‘female’ and ‘male’ typed tasks. The female typed tasks include 1. laundry and ironing 2. House cleaning. Male typed tasks include 1. odd jobs and 2. financial administration. Respondents are asked “How are the household tasks divided between you and your partner?”. Answer categories range from 1 “I do much more than my partner” 2 “I do more than my partner” 3 “we do about the same” 4 “My partner does more than I” and 5 “My partner does much more than I”. The responses for male respondents are reverse coded so that lower values of the scale correspond to women’s greater contribution and higher values on the scale correspond to men’s greater contribution. The responses to each question are averaged to create an index for each gender type task. On average, women do more of the female typed tasks, 1.81, but male typed tasks are divided almost equally 3.45 (See Table 7.2 for descriptive statistics).

7.5.2 Independent Variables

The LISS panel uses the Rokeach Value Survey (RVS) to measure respondents’ personal values (Rokeach 1973). The items and values used depart from those described in Chapter 4. The conservation value includes an item “clean”. To avoid tautological conclusions, I left this item out of the conservation measurement, leaving only obedient and self-controlled. All value measures are computed by taking the mean of the items as it is not possible to run a multi-group confirmatory factor analysis on two items. Therefore, the value measures are not standardized as in the other chapters.

Four questions tap into beliefs on mother’s responsibilities and possibility of combining childcare and paid work, which are referred to as motherhood norms. The measure was constructed as an index, averaging over items, after multi-group factor analysis failed to reject scalar invariance (RMSEA = .06 CI .05-.06, CFI = 0.98, TLI = 0.99, SRMR = 0.03). The items are: “A working mother’s relationship with her children can be just as close and warm as a mother who does not work.”, “A child that does not go to school yet, will most likely suffer

if his or her mother works”, “Overall, family life suffers if the wife has a full-time job”, “A woman is more suited to raising small children than a man”. Respondents could answer 1 “completely disagree” 2 “disagree” 3 “do not agree or disagree” 4 “agree” 5 “completely agree”. Answers for the first question were reverse coded to ensure that positive values reflect gender essentialist beliefs. Factor scores were computed from this model.

Essentialist beliefs are measured with four items: “It is unnatural for women in firms to have control over men”, “Generally speaking, boys can be reared more liberally than girls”, “It is actually less important for a girl than for a boy to get a good education”, “A woman is more suited to rearing young children than a man”. These items are rated on a scale from 1 “Fully Disagree” to 5 “Fully Agree”. The items show acceptable fit in a multi-group factor analysis indicating scalar invariance across waves (RMSEA 0.05 CI 0.05- 0.06, CFI = 0.97, TLI = 0.98, SRMR = 0.05). Factor scores were computed from this model.

Norms on Men’s contribution to household labor are measured as the mean response to two questions. The respondents are asked whether they 1 “completely disagree to 5 “completely agree” with the statements “Men should do a greater share of the household labor than they do now” and “Fathers ought to do more in terms of childcare than they do at present”.

Controls include age, birth year, employment status, marital status, the number of children in the household and education level, relative education level and natural log of personal income in euros. Employment status is measured with three categories. Respondents who indicate not to have a job are unemployed, those who are employed and have a contract for 0 to 32 hours are part-time workers. Respondents who have a contract for 33 or more hours are full-time employed. Respondents are asked their marital status, which include never married, married, separated and divorced. The divorced, separated and widow(er)s are dropped from the analysis (297 cases). A categorical variable is included indicating whether there are 0, 1, 2 or more than 2 children in the household⁹. Education level is a categorical variable indicating primary school, lower secondary (VMBO), higher secondary (HAVO/VWO), lower vocational (MBO), higher vocational (HBO) or university education (WO). Relative education is coded as 1 if the respondent has a higher level of education than their partner and 0 otherwise.

⁹ The age of children was not available for many observations. The age of children and number of children are conflated in this number of children measure as the likelihood of younger children being in the household increases with the number of children.

7.6 Analytical Strategy and Sample Selection

The aim of this chapter is to examine how gender norms and gendered identities impact the division of household labor. I expect men and women with different values to differ in the division of labor. Second, I want to examine whether differences in values among men have similar effects as differences in values among women. In short, I want to compare differences in levels of values between men to differences in values between women. Since gender, values and identity are relatively stable, I examine the effects of these between individuals and run between effects regressions. These models show how differences between groups, specifically, how a one-point increase in the average of an independent variable for person i effects the average of the dependent variable for person i , over the period T . The between effects models are estimated via OLS using the equation $\bar{y}_i = \alpha + \bar{x}_i\beta + v_i + \bar{\varepsilon}_i$. An advantage of between effects models is that they include several measurements of individuals over time and thereby reduce measurement error. Random effect models would be more efficient to run, but these were shown to be inconsistent in a Hausman specification test.

In total I run four models, one model for each combination of the gender of the respondent and dependent variable (e.g. Male Respondent, Female Partner on Female Typed Tasks). Therefore, one model uses the division of labor reported by men while the other regression uses the division of labor reported by women as their outcome but all models include the respondent and partner characteristics, such as their norms, values, and controls¹⁰. Men tend to overestimate their contribution to household labor while women are fairly accurate (Kan 2008). Regressing the independent variables on both men and women's answers on the division of housework can guard against this bias.

In total there are 12497 cases which meet the sample in the LISS Panel. The survey design and missing data reduced the number of cases available. Missing data on the income and partner's income reduces the sample to 11822. The survey design further reduces the sample. The Rokeach value survey items were not fielded to respondents in 2010 and 2012. This reduces the number of cases to 6580. Lastly, information on both partners needs to be available for the regression on value items. Missing data on partner's personal values reduces the number

¹⁰ Including norms and personal values may lead the reader to suspect collider effects. However, the correlation between personal values and the two norms is surprisingly small, the largest being 0.07.

of cases to 5761 and partner’s norms to 5581. Lastly, cases are dropped because the partner’s education level is missing. The final sample includes 5575 cases.

7.7 Results

In this section I first describe average differences between men and women in terms of the reported division of household labor, values and norms. Then I show bivariate relationships between household labor and the values and norms of men and women. These bivariate relationships are followed by coefficient plots and tables of the regressions proposed earlier.

Table 7-1: Gender differences in the mean of reported division of labor, personal values and norms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gender	Female typed tasks	Male typed tasks	Achievement	Benevolence	Conservation	Openness to Change	Motherhood Norms	Norms on Men	Essentialist Beliefs
M.	1.93 (0.02)	3.61 (0.02)	4.75 (0.02)	6.04 (0.01)	4.98 (0.02)	5.97 (0.01)	-0.10 (0.02)	3.26 (0.01)	0.10 (0.02)
F.	1.71 (0.02)	3.27 (0.02)	4.50 (0.02)	6.37 (0.01)	5.05 (0.02)	6.10 (0.01)	0.15 (0.02)	3.42 (0.01)	-0.17 (0.02)

Note: Marginal Effects of gender on column header variable from between effects regression. N = 5534, all differences between men and women are significantly different from each other at $p < 0.001$. The scales of header variables: Column 1 and 2: 1 “She does most” 3 “Equal” 5 “He does most”; Column 3 to 6: 1 extremely unimportant to 7 extremely important; column 7 and 9: N(0,1) positive scores indicate respondents agree that women can combine care and paid work, positive scores indicate gender essentialist beliefs. Column 8: 1 “fully disagree” to 5 “fully agree”.

Table 7.1 shows the mean reported household division of labor, personal values and norms of men and women. There are significant differences between men and women ($p < 0.001$) on all variables. Column 1 and 2 show the reported division of household labor. Men and women report that she does more female typed household labor on average, but the estimates of men are slightly higher, indicating men report a more equal division than women. Men also report that he does more of the male typed tasks. However, women report an almost equal division of male typed tasks.

Turning to gender differences in values, Table 7.1 is in line with previous findings (Schwartz, 2015). Women rate benevolence significantly more important than men (Column 4) and men find achievement more important than women (Column 3). There are no substantive

differences between genders in ratings of conservation (Column 5) and small differences in openness to change (Column 6)¹¹.

There are also difference in the agreement to normative statements. Women more readily agree that men should do more household labor than men themselves (column 8). Women also have less essentialist views on motherhood, they are more likely to disagree with statements that men and women are naturally different.

The Figures 7.1 and 7.2 show the bivariate associations between values, norms and the reported division of household labor for men and women. As figure 7.1 shows, men's values show little to no association with division of 'female' typed tasks. However, men's normative ideas on men's contribution to household labor are associated with the division of household labor. There is almost a 1-point increase towards a greater contribution of men between men who fully disagree and those who fully agree that men should do a greater share of the house and care work. Men's beliefs about mothers combining care and paid work as well as their essentialist beliefs are also associated with the division of household labor. The more men believe mothers must prioritize care over paid work and the more gender differences are perceived as natural, the less household labor men contribute.

Women's values are associated with their contribution to household labor. In particular, the importance women attach to benevolence is associated with their greater share of household labor. Additionally, women's normative ideas on the incompatibility of care and paid labor and gender essentialist beliefs are also associated with their greater share of household labor. However, their conservation values are not associated with the division of household labor.

Figure 7.2 shows that most values and norms of men and women do not have a bivariate association with the division of 'male' typed tasks. However, there are two exceptions. Women with essentialist beliefs do less male typed tasks while women who have rate conservation highly do more male typed tasks.

¹¹ The gender difference in openness to change is opposite to that found in the literature. However, this effect can be explained by the cultural and economic environment. The size of the gender difference is negatively related to economic development and individualistic cultures for openness to change values (Schwartz and Rubel 2005), while gender equality indexes are related to larger gender differences in self-enhancement and self-transcendence values.

Figure 7-1: Linear Association between Values, Norms and Division of “Female” Typed Tasks

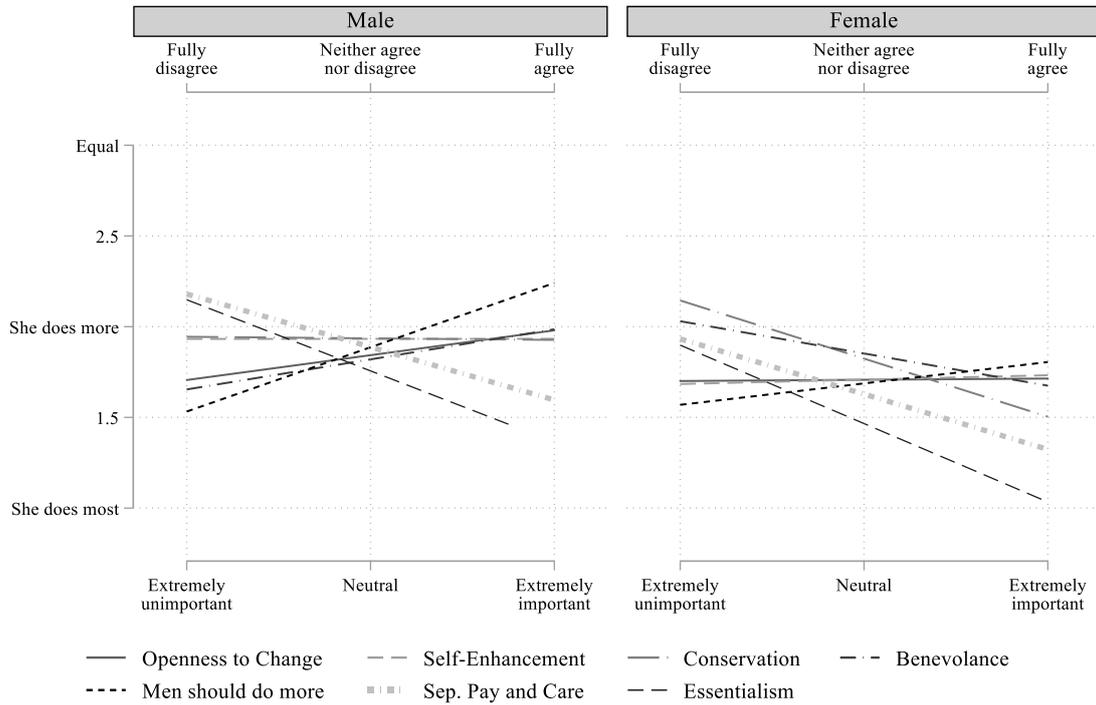


Figure 7-2: Linear Association between Values, Norms and Division of “Male” Typed Tasks

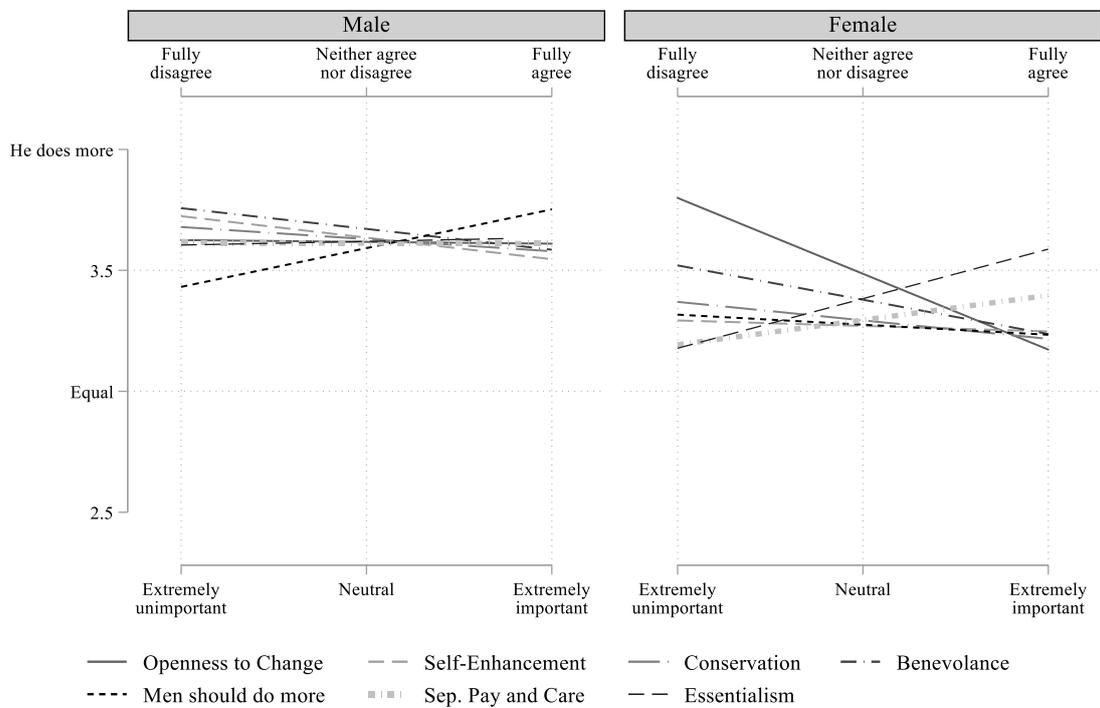
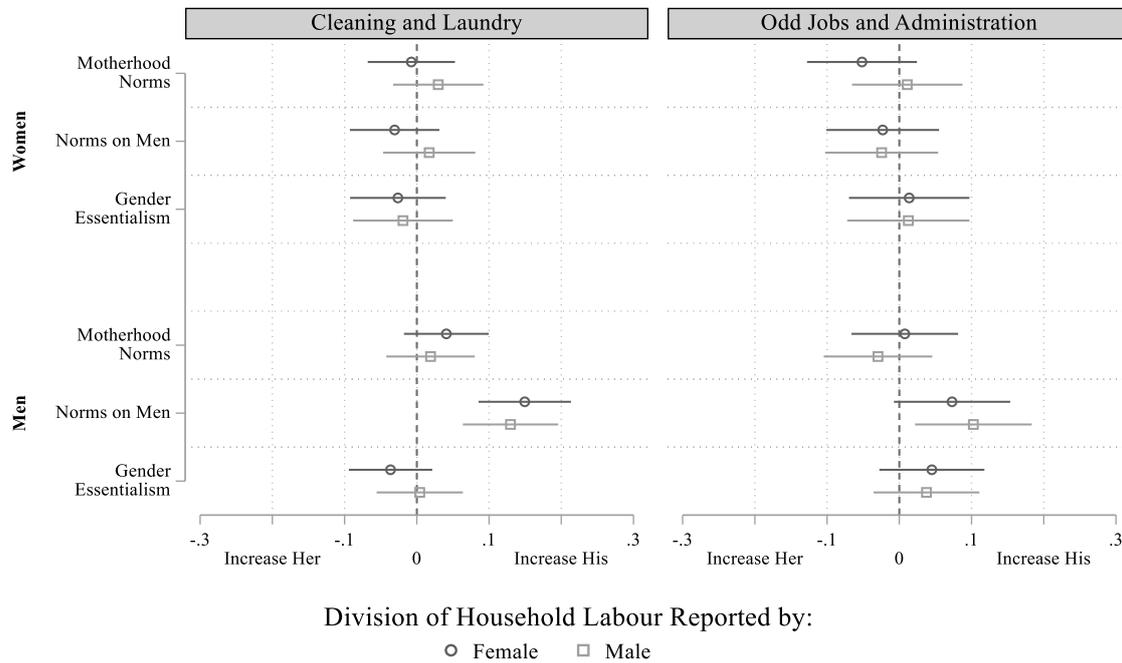


Figure 7-3 The Effects of Norms on the division of "Male" and "Female" Typed Household Tasks



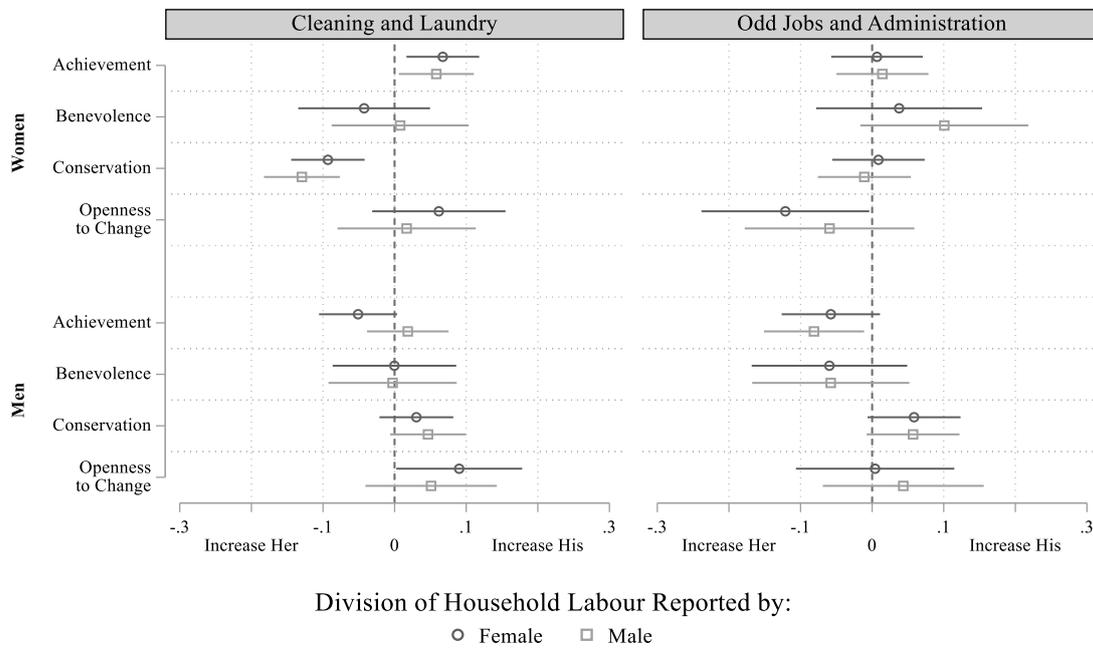
LISS Data 2008-2014 Between Effects regression of 25-65, cohabiting couples, controlling for year of birth, education, age, number of children in the household, employment status, marital status

Figure 7.3 plots the estimated coefficients of norms from the between effects models (see Appendix D for regression Tables). These models include control variables from the exchange and time availability perspectives. Negative coefficients indicate a move towards a division of labor where she does a greater proportion while positive effects indicate a move towards a division of labor where he does a greater proportion. The effect of each norm is reported by gender of the respondent and the gender of the partner who reported the division of labor.

Figure 7.3 shows norms have a significant effect on the division of female typed labor, but only if held by men. Men who believe men in general should contribute more to household labor follow their own norm. The effect of a one-point increase agreement to the norm is associated with about a 0.15 increase in the reported division of labor of female and male typed tasks, in favor of the men doing more. The effect is significant whether the male or female partner reports the division of female typed household labor while it is significant only for male type labor when the male reports the division of labor. The norms women hold do not, in general, significantly impact the division of female typed household labor. Hypothesis 5 therefore finds

limited support. It was expected that all norms would affect the household division of labor as previous research has found a robust effect of gender norms on the division of household labor.

Figure 7-4 The effects of Personal Values on the division of “Male” and “Female” Typed Household Tasks



LISS Data 2008-2014 Between Effects regression of 25-65, cohabiting couples, controlling for year of birth, education, age, number of children in the household, employment status, marital status

Figure 7.4 shows the effects of men and women’s personal values on the division of female and male typed household tasks. Benevolence and achievement values were expected to be positively and negatively related to contributions to the housework, respectively. Hypothesis 1 is partly supported, women’s achievement values impact the division of labor positively, meaning that women who value achievement do a smaller proportion of the female typed labor, irrespective of who reports the division of labor. Men’s achievement values are also negatively related to their contribution to male typed labor. Neither gender’s benevolence values are significantly related to the division of household labor. Hypothesis 2 also finds partial support, women’s personal belief in tradition and social conformity have a negative effect on the division of cleaning and laundry tasks, meaning that women who value conservation do a greater proportion of these tasks. Lastly, hypothesis 3 is also partly supported, women who are more open to change report doing a greater share of the male typed tasks, while men who are open to change do more female typed tasks, however these effects are only significant if she reports the division of labor. In brief, I find some support for the conjecture that personal values affect

the division of household labor and that the effect is in part due to the gendered application of values.

The time availability perspective argues that employment and children in the household are two of the main factors constraining and increasing the division of household labor. In accordance with this perspective, respondent's and partner's employment status are related to household labor. If men, women or their partner work more, they contribute less to the household labor. However, women report a similar division of labor when they are unemployed or part-time compared to full-time employed, while men report doing more when unemployed relative to part-time employed and to full-time employed. Thus, men's share of household labor is associated with employment hours while that of women is only associated with labor market participation.

The effect of children in the household is also gendered. In fact, the number of children is associated with an increase in inequality in the division of household labor to the detriment of women, irrespective of whether he or she reports the division of female typed labor. Similar differences were found in Germany, where the arrival of children was shown to usher in a more traditional division of labor (Grunow et al. 2007; Grunow, Schulz, and Blossfeld 2012; Kühhirt 2012; Leopold et al. 2018). The presence of children in the household has no effect on male typed labor, likely because children have little effect on the amount of odd jobs and administration relative to cleaning and laundry.

The exchange perspective holds that men and women negotiate the household labor. Power in this negotiation stems from their human capital and income contribution to the household. Women's education is related to a lowering of their contribution to 'female' typed tasks while men's education is not associated with their contribution to female typed tasks. Relative education is significant for male typed tasks. When men are relatively higher educated, they report doing more of the male typed tasks. The effect of income is also significant. Men and women with higher incomes report lower contributions to female typed tasks, irrespective of who reports the division of labor. However, men's income has between two to three times the effect of women's income.

7.8 Discussion and Conclusion

Despite the gender revolution, which saw women's educational achievement surpass that of men, and women enter male dominated occupations, men have not stepped into women's roles.

The division of household labor exemplifies this general trend. While women reduced their unpaid working hours and substantially increased their paid labor, men have not reciprocated by reducing paid labor or increasing unpaid labor to the same extent. Inequalities in the division of labor are often attributed to gender norms. Recent research has emphasized the need to distinguish different types of norms, whether they address men, women, their responsibilities or stereotype essentialist characteristics (Grunow and Baur 2014; Grunow et al. 2018; Knight and Brinton 2017; Scarborough et al. 2019). Additionally, some authors argue that gender stereotypes are harmful because they can be internalized and expressed as personal choices (Charles and Grusky 2004; Cech 2013). I argued that gender is internalized and expressed as identity through personal values. Therefore, I hypothesized that norms and personal values will have independent and gendered effects on the division of household labor.

First, this chapter contributes to the literature on household labor by distinguish the content of norms and which partner holds them. Like Evertsson (2014), I find that only men's norms impact the division of household labor. Specifically, only the norms that men hold about men's responsibilities in the household are associated with a greater contribution on his part. Norms on men's responsibilities had a significant effect while norms on women's care responsibilities and gender essentialist ideals did not have a significant effect. These findings support recent attention given to the dimensionality of gender norms. Gender norms cannot be reduced to a single dimension as is commonly done. Furthermore, these results reinforce the utility of the gender perspective by showing that men and women's beliefs do not equally affect the division of household labor. However, these results do not support the theory that essentialist or essentialist egalitarian norms are especially important for the stalled progress in the division of household labor, as they are for occupational and educational choices (Charles and Grusky 2004; Cech 2013).

Second, this chapter shows the utility of personal values in studying inequalities in the household. I hypothesized that gender shapes how personal values are applied in the household. Stereotypes on gender abilities and the abilities needed for certain tasks build cultural bridges between values and behavior such that women link their gender stereotypical values to doing housework while men link their stereotypical values to refraining from doing housework. Women are on average more self-transcendence oriented while men are more achievement oriented. Thus, I hypothesized that benevolence is associated with doing a greater portion of

the household labor while achievement is associated with doing a lower proportion of household labor. Additionally, conservation values were expected to be related to performing normative roles while openness to change values are expected to be related to alternative arrangements.

These hypotheses found partial support, in that women's rather than men's values were associated with the division of female typed household labor. Specifically, women's conservation values are associated with her doing a greater share. These results indicate that personal values are a pathway for the reproduction of gender in the household. However, personal values also seem to be a way to undo gender. The achievement values of women, a gender non-stereotypical value, were also associated with their male partners doing a greater share of the household labor.

The results presented here also raise some methodological questions related to gender. In most cases the effects of values on the division of labor were consistent whether men or women reported the division of labor. However, there were exceptions which indicate that answering questions on the household division of labor can itself be an exercise in gender display. Indeed, Kan (2008) found that men with more traditional gender norms under reported their hours of housework. Likewise, individual's values and norms could affect the reported division of labor systematically. For example, women's conservation values have a smaller association with the household division of labor when it is reported by her rather than by him. Additionally, the point estimates suggest men report no association between their household contribution and achievement values while women report a negative relationship. These differences are especially interesting since respondents answer questions on norms, values, and the division of household labor in different modules which occur several months apart. Therefore, there is no reason to suspect respondents are motivated to present a coherent and socially desirable responses. This suggests that household division of labor questions are systematically biased by gender. Further research could investigate discrepancies in reporting between men and women and how these are related to their gender ideology and identity.

A limitation of this chapter is that it does not fully engage with the multidimensionality of gender norms. Previous research has found four or five different types of gender ideologies prevalent within Europe and the U.S.A (Grunow et al. 2018; Knight and Brinton 2017; Scarborough et al. 2019). In this chapter I did not distinguish between norms on joint or separate spheres of influence and gender essentialism as there were too few items to create

factor solutions. Further research could investigate whether these different constellations gender ideologies are related to different constellations of personal values and to what extent these independently effect the household division of labor and interact within couples.

The within couple comparisons and interaction is another limitation of this chapter. These could strike at the heart of the theories on household inequalities and the life-course perspective, that is the agency and negotiation between partners. For example, openness to change values have a very large confidence interval which indicates that these values may not, by themselves, pull couples towards a specific division of labor, but rather open them up to a variety of divisions. In other words, couples who are both high on openness to change may not do gender to the same extent which increases the influences of other factors, hence the large confidence intervals. Moreover, differences in values and norms between couples may impact how the division of household labor develops over time with family transitions. Alternatively, values and norms may change in response to these transitions. By modelling these dynamics and including values, future studies could take into account the agency of individuals and their resources in the couple context.

Overall, the results highlight that gender shapes the power dynamics between men and women as a multi-level system that operates at a social (normative) and individual (values) level. The results show that men's norms have, on average, an effect on the division of household labor but women's norms do not. Implying that there is a power imbalance: women are unable to implement their normative beliefs while men are. Additionally, women's internalization of gender, that is, their belief in social conformity and tradition, seems to have independent effect not constrained by men's capital, norms and beliefs. However, these results also provide some hope in that women's gender atypical values had an equalizing effect on the division of household labor. These patterns show both normative gender ideologies of men and the internalization of gender into women's identity contribute to the inequalities in the division of household labor.

Chapter 8 Conclusion

Values research has suffered under uncertainty over the definition, the content, the number, and the measurement of values. These challenges left the field fractured by a diversity of theories and partly overlapping measures, preventing a systematic overview of their causes and consequences. Partly because of these difficulties, prominent sociological work on ideational factors currently focuses on norms and attitudes. This research is valuable but there are reasons to study personal values. Chief among them, is that personal values are internalized goals and motivations of individuals. Such psychological attributes are under researched and under used in sociological research (Mayer 2009). Yet psychological attributes shape the motivations, perceptions and interactions of individuals which create social structures (Ridgeway 2009; Sewell 1992; West and Zimmerman 1987). Moreover, social structures mold individuals' motivations, perceptions, and interactions. These structural effects on individuals are visible in the personal values of individuals. Thus, studying personal values can shed light on the psychological mechanisms through which structural and institutional constraints shape individuals and show which goals individuals are motivated to achieve within these constraints. These considerations provide sociologists with two broad angles to study values: 1. as a product of need fulfillment structured by status characteristics, socio-economic conditions, and identity and 2. as partial causes of internally motivated behavior within a situational and cultural context.

This dissertation made several contributions to the study of values in sociology. First, it leverages the theory of basic values to further sociological understanding of social structures and behavior using the life-course perspective. Chapter 2 presented the theories linking abstract values to concrete behavior. Previous values research did not adequately separate values, culture, and their symbolic enactment in behavior. It requires cultural knowledge to understand how actors interpret behavior as symbolic representations of abstract values. Additionally, the chapter lays out a theoretical framework for a taxonomy. In Chapters 5, 6, and 7, I showed that differentiating between the four higher-order values makes a difference in how we understand and interpret the results.

Second, the empirical chapters used a life-course perspective to study values. Previous works in often took a static approach where social class or cohorts would have a single effect on the values of the incumbents. Life-course research emphasizes outcomes emerge from a process

where actors attempt to attain their goals within situational, cultural and historical contexts. In chapter 5, I examined differences in values between fields of study in early adulthood to differences in values between occupations in later adulthood and examined whether occupations shape the development of values. In chapter 6 I used event history analysis to model the process leading up to first marriage, including changes in individual and contextual factors. In chapter 7 I analyzed inequalities in household labor as a negotiation between a couple, recognizing that their lives are linked and that their decisions are calibrated to each other.

Third, gender was introduced as an important aspect of values research. Previous values research overlooked gender as a focal point of analysis. The life-course perspective makes gender an unavoidable analytical angle as it drastically shapes decision making and behavior. Using personal values, I showed that individuals are not only constrained by institutional factors which affect genders differentially, men and women also carry out personal preferences which are expressed in a gendered manner. Moreover, I showed that men and women with gender atypical values are more likely to make gender atypical choices. This implies there is a limit to normative and institutional changes to reduce gender inequalities as individuals will internalize gender stereotypes and volitionally make gendered choices.

From the preceding chapters we can make some broad generalizations in terms of the effects of personal values and social structural effects on personal values. Self-transcendence and self-enhancement values are important for processes that depend on interpersonal interaction. These values are shaped by gender which frames any interaction and to a lesser extent the content of jobs which shapes daily experiences. These values also effect decisions in the private sphere such as the probability of first marriage and the division of household labor. Conservation values are clearly shaped by stratification, the more resources an individual has the less conservation oriented they are. Lastly, Openness to change values were not clearly associated with any position, transition, or state. In the next sections I review major findings in the empirical chapters and discuss their implications and directions for future research in further detail.

In the rest of the conclusion I will elaborate on the two main process studied in the preceding chapters and the contribution of the dissertation as well as directions of future research. Section 8.1 will discuss the process of how social structures shape personal values and what this

dissertation adds to our understanding and what is still missing. Section 8.2 discusses major findings of the dissertation on the effect of values on behavior. Section 8.3 discusses future directions for research and Section 8.4 present closing remarks.

8.1 Why and How are Values Shaped by Social Structure

Theoretically we can sketch a concise path between values and social structures. As representations of human needs, values are shaped by socio-economic conditions because social structures distribute resources and provide opportunities to positions with which individuals can fulfill their needs. However, converting these statements into research is difficult as human needs are diverse and are fulfilled through social interaction that itself is dependent on cultural frames such as gender and social status.

The first point is a refinement of a consensus. That is, social class and material conditions of life create differences in conservatism and openness to change values (Inglehart 1977; Kohn 1989). In the Chapter 5, only conservatism and not openness to change values are associated with social class and education. In fact, when examining correlations reported by Kohn and Schooler, they find the same: the complexity of work is correlated with conservatism values but not openness to change values (Kohn and Schooler, 1983 Appendix B). Social class can satisfy basic needs such as security which reduces the importance of conservatism values but does not necessarily provide the resources and conditions to promote openness to change values. This may seem like a minor point, but it has implications for several theories. Inglehart (1977) assumes that conservatism values decrease and openness to change values increase with rising wealth and a better position in society. The Second Demographic Transition is built on Inglehart's work. These works may profit from distinguishing openness to change and conservatism. This may reveal independent structural factors explain variation in these two values and therefore also change the narrative of how these structural factors contribute to changes in the outcomes they examine.

Chapter 5 showed gender, and, to a lesser extent, the content of occupations shaped self-transcendence and self-enhancement values. These values are based on needs for belonging, love, esteem and respect, which are also the currencies of social hierarchy. However, gender, social class, ethnicity, race, and religion are likely to create complex identities which shape how individuals fulfill their needs. These interactions complicate a thorough analysis and a systematic understanding still eludes us.

I want to draw attention to our limited understanding of social structural effects on self-transcendence and self-enhancement values as these values are shaped by major inequality generating processes, including gender and gendered choices in the household and the labor market. The limited knowledge of these processes can be traced to three theoretical and methodological flaws. First, inadequate value taxonomies often subsumed this value as part of other person-focused values such as self-direction or stimulation values (openness to change). Thus, there is little research on it. Second, there has been an over emphasis on the static (personality and social structure) instead of process (life-course) viewpoints in values research. Third, statistical frameworks and methodologies lead practitioners to assume that any variable x has one interpretation and one type of effect and that x has a similar effect on y across all cases.

These assumptions and methods are inadequate for values research. Gender, social class and occupational status may indicate what cultural, social, and economic capital an individual has but fails to signal how individuals translate these into need fulfillment. As a result, controlling for socio-economic and demographic characteristics in a regression framework will produce misleading or confusing results. Longest, Hitlin, and Vaisey (2013:1519) came to similar conclusions: “Previous domain-specific studies have obscured the complicated—and often conflicting—ways individuals’ locations in various social systems play out in what they find valuable”. An example is found In Chapter 5 where the differences between occupational groups and education level interacted with gender. The differences in values between occupations can be explained through men and women’s overall difference in base levels interacting with their occupational self-selection and experiences. However, the interaction with education is difficult to make sense of; why do only women with university degrees value benevolence less than those with secondary school diplomas? More research is needed using the life course approach and methodologies such as event history analysis, growth models and sequence analysis. These may shed light on the development of personal values as it is shaped by family, career, and educational trajectories and sequences, and how these differ between groups such as migrants and genders.

8.2 How Values Guide Behavior

Studying the effect of values on behavior shows how social structure shapes action. Values role in behavior can be understood using “doing gender” and status characteristics theories which

highlight that inequalities are produced by the internalization of stereotypes and interaction. When internalized, these stereotypes are reflected in personal values and we end up “doing gender” through self-expression. In all empirical chapter’s gender and values interacted to produce behavior. These results provide support for the “doing gender” and status characteristics theories. Gender equality is partly dependent internalized dispositions which individuals express volitionally. This implies gender inequality will persist, without external pressures or incentives and is resistant to structural and normative pressures.

In Chapter 7 personal values were examined as reflections of gender identity and hypothesized to affect the household division of labor using the “doing gender” and status characteristics theories. My findings show that women who are more conservation oriented do more hours of housework which creates inequality in the division of labor. The effects of norms further supported the gender perspective. Women’s endorsement of men’s roles did not influence the division of household labor; however, men’s endorsement of these norms was substantive and significant. This highlights that inequality is produced through internalized cultural ideals independently of normative pressures. These theoretical frameworks can be expanded to other forms of difference such as social status and ethnicity.

Cultural narratives on gender must connect men’s and women’s identity to doing household labor. Chapter 7 suggests that men do household labor out of a sense of normative obligation (external regulation) while women have internalized their motivation (internal regulation). These changes are more likely to happen through cohort replacement as gender is central to how we relate to the world. Indeed, Sullivan et al. (2018) proposed an intergenerational theory to understand the slow closing of the gender gap in household labor.

Gender, values and occupation were also found to be interrelated. Previous research shows that, gender shapes values. Gender differences in values appear early in life and have a genetic basis (Kandler, Gottschling, and Spinath 2016; Uzefovsky et al. 2015). Additionally, personal values are shaped in the family, by the occupation of the father, and social class (Mortimer 1975). I found differences between individuals but only small changes within individuals between ages 30-55. This points to selection and reinforcement of values as individuals select into fields of study and occupations which then modify the starting points of value trajectories which were found to be predicted by psychological theories of development. These associations

indicate personal values can be a mechanism for the reproduction of social class immobility and gender segregation.

In short, there is convincing evidence that men and women differ in their values and apply value differently. To some extent, individuals internalize motivations and orientations through repeated experiences shaped by status characteristics, identity and economic conditions which lead them to reproduce these social structures. This insight can be applied to life-course studies on inequalities to further differentiate agency and constraints. That is, to examine whether inequalities are associated with (changes in) personal values or (changes in) structural constraints.

8.3 Measurement Issues

During this dissertation, several measurement issues were brought to light. First, existing sociological works lack a theoretical bases for the conceptualization and dimensions of values. The second and unresolved issue is the computation of value measures, should they be ipsatized or not, and what information does each method offer.

In Chapter 5 and 6, the SDT, the work by Kohn and his colleagues and the job values literature were critiqued on their conceptualization and measurement of values. Existing research miss-specifies the dimensionality of values because measures are not based on a theory of values and perhaps and the use of factor analysis. Multidimensional scaling is more appropriate for circumplex structures. However, this method relies on theoretical knowledge for interpretation as it is a data reducing technique for which fit statistics are still underdevelopment (Mair, Borg, and Rusch 2016). Nevertheless, MDS was successfully implemented and the resulting value types were validated with factor analysis in Chapter 4. The personal values literature took most of the 20th century to find a way to analyze the dimensionality of values and profited immensely from it, sociological works on values could easily capitalize on these gains.

The dimensionality of value orientations is important to consider for several reasons. First, without a theory to conceptualize and measure values, the literature will continue to be a hodgepodge of ad-hoc measures which partly overlap. This makes it difficult for any systematic comparison of studies or overview of the correlates of specific value dimensions. Second, it is easy to unknowingly lump together different values because of their circumplex relationship. This can occur when measuring opposing and adjacent values, both are problematic. When measuring opposing values as one dimension it is important to consider that the contexts that

promote opposing value orientations are likely mutually exclusive as their need basis and goals are too. This implies that the opposing values will have different and non-linear functional forms to third variables. For example, conservation values are more important to individuals from lower classes compared to higher social classes, while openness to change values are similar within employee classes and differ between employees and the self-employed/employers. The job values literature conflates conservation and self-enhancement values and concludes these are related to social class. In chapter 5 I found self-enhancement is not related to social class in a hierarchical manner but rather the type of work one does. In chapter 7 I showed that the Second Demographic Transition (SDT) literature, does not distinguish between the need basis and goal focus of values. This leads to erroneous claims that all growth values hamper household formation.

The second major issue of value measurement is their computation, researchers can take their absolute or relative (ipsative) ratings. In Chapter 5, all absolute value ratings declined over time. This result may be a methodological artefact, that is, respondents may change their scale use over time, or it may be due to panel attrition. It could also be an effect of ageing, this is unlikely as a general decline in value rating has not been found in other studies using the Portrait Values Questionnaire (Cieciuch et al. 2016; Daniel and Benish-Weisman 2019; Milfont et al. 2016; Vecchione et al. 2016, 2019). However, the job values literature has found an across the board decline in job value ratings (Johnson 2001b, 2002). If the effect is not a methodological artifact, we may ask what a decrease in average ratings means. Schwartz (2003) contends these are uninformative because they do not reflect the relative importance of values within the person's value system and are affected by response bias. However, Borg and Bardi (2016) found that the mean rating of values is associated with subjective well-being. The importance and meaning of relative and absolute ratings of values is a topic that must be further developed.

8.4 Limitations and Future Directions

There are limitations to the empirical chapters that must be acknowledged. In Chapter 5, I have not been able to distinguish socialization from selection in the association between values and occupations. The job values literature uses structural equation modeling to trace changes in values from education to the labor market. However, the LISS data does not provide the required data since respondents stay in the panel for an average of three years. I opted to

examine both the between and within person variation of values in different age categories to examine whether selection or socialization is more plausible. A second limitation of Chapter 5 is the absence of ISCO codes which forced the use of a self-identified occupational class. As seen in Appendix A, the self-reported occupational measure introduced a substantial amount of measurement error. The third limitation of Chapter 5 is that social classes provide a general overview of the variation in values but leaves many other questions unanswered; what is it about social class that shapes values? For example, to what extent do experiences of employment insecurity affect values. Future studies could examine variation within classes to provide answers to these questions.

In Chapter 6, more theoretical and methodological attention could be expended on economic and labor market factors. Previous research found macro and household economic conditions impact the timing and probability of marriage (Liefbroer 2005). Additionally, the marriage process differs considerably across educational categories both in the timing and probability of the event (Elzinga and Liefbroer 2007; Zimmermann and Konietzka 2018). None of these factors was found to be related to the probability of marriage in Chapter 6. This may be due to the low quality of the variables used. Additionally, it is likely that values are also affected by economic conditions which lead to the event of marriage. It may be more appropriate to model how labor market careers of individuals develop and affect value trajectories and how these jointly affect the probability of marriage. This could also illuminate whether individuals willingly postpone or forgo marriage or whether the declining grip of institutions creates too much uncertainty to commit to marriage.

The last limitation concerns the measurement of values. In Chapter 4, the items used for the openness to change value measure behaved poorly, it did not correlate in the expected ways with similar value measures. This may have impacted the results in the other chapters. Especially in the chapter on the household division of labor where this higher order value was of special interest. Additionally, the items chosen for each value measure are not all equally representative of their construct.

Future research could also build on the chapters using a comparative design. Cross-national differences in normative contexts and gender ideology may impact how much and why individuals divide the household labor. Previous research on this topic has mostly examined norms but as shown in the Chapter 7, internalized gender identities also play a role. These

comparisons may further elaborate the role of gender norms, identity and bargaining in shaping household inequalities. For example, individual's values may have little influence in contexts where the breadwinner-housemaker gender ideology and norms prevail. Similarly, Chapter 5 can be expanded upon and build on the work of Melvin Kohn and colleagues. Social and occupational classes are clearly associated with personal values, but little is known how institutional contexts shape these relationships.

8.5 Final Remarks

Studying abstract values is a challenge for sociology. It is my hope that the theories presented here will further values research and sociological knowledge of social structure. I have argued that values are shaped by and interact with identity and are intersubjectively represented in culture. These properties enable us to outline a process between the individual's values and their position which produces behavior. That is, personal values are partially a product of a position within a social system. These values are expressed using the culture of that system thereby reproducing the relationships the position entails.

In this dissertation, I have shown that values can be applied successfully by utilizing a dual process theory of cognition, symbolic interactionism, and an understanding of Dutch culture. In this dissertation I showed that the life-course perspective is invaluable in investigating how social structures such as gender and social class interact with personal values to produce behavior and inequalities. I found self-transcendence and self-enhancement values are important to consider. These values have largely been ignored in favor of the relationship between social stratification, conservation values and openness to change values. I have shown that gender shapes self-transcendence and self-enhancement values and their application in choices of fields of study, occupational socialization, the probability of marriage and the production of inequalities in household division of labor.

References

- Abbott, Andrew. 1992. "From Causes to Events: Notes on Narrative Positivism." *Sociological Methods & Research* 20(4):428–55.
- Adorno, Theodor W., Else Fenkel-Brunswik, and Daniel J. Levison. 1950. *The Authoritarian Personality*. 1st ed. New York: Harper & Brothers.
- Allport, Gordon W., Philip E. Vernon, and Gardner Lindzey. 1960. *Study of Values*. Oxford, England: Houghton Mifflin.
- Almeida, Joo Ferreira de, Fernando Lus Machado, and Antnio Firmino da Costa. 2006. "Social Classes and Values in Europe." *Portuguese Journal of Social Science* 5(2):95–117.
- Alon, Sigal, and Thomas A. DiPrete. 2015. "Gender Differences in the Formation of a Field of Study Choice Set." *Sociological Science* 2:50–81.
- Aries, Philippe. 1980. "Two Successive Motivations for the Declining Birth Rate in the West." *Population and Development Review* 6(4):645–50.
- Bales, Robert F., and Arthur S. Couch. 1969. "The Value Profile: A Factor Analytic Study of Value Statements." *Sociological Inquiry* 39(1):3–17.
- Barber, Jennifer S. 2001. "Ideational Influences on the Transition to Parenthood: Attitudes toward Childbearing and Competing Alternatives." *Social Psychology Quarterly* 64(2):101–27.
- Bardi, Anat, Kathryn E. Buchanan, Robin Goodwin, Letitia Slabu, and Mark Robinson. 2014. "Value Stability and Change during Self-Chosen Life Transitions: Self-Selection versus Socialization Effects." *Journal of Personality and Social Psychology* 106(1):131–47.
- Bardi, Anat, and Robin Goodwin. 2011. "The Dual Route to Value Change: Individual Processes and Cultural Moderators." *Journal of Cross-Cultural Psychology* 42(2):271–87.
- Baumeister, Roy F., and Mark R. Leary. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation." *Psychological Bulletin* 117(3):497.
- Becker, Gary Stanley. 1998. *A Treatise on the Family*. Enl. ed., 1. paperback ed., 4. print. Cambridge, Mass.: Harvard Univ. Press.
- Begall, Katia. 2013. "How Do Educational and Occupational Resources Relate to the Timing of Family Formation? A Couple Analysis of the Netherlands." *Demographic Research* 29(34):907–36.
- Bengtson, Vern L. 1975. "Generation and Family Effects in Value Socialization." *American Sociological Review* 40(3):358–71.
- Bengtson, Vern L. 2008. "Longitudinal Study of Generations, 1971, 1985, 1988, 1991, 1994, 1997, 2000, 2005 [California]."

- Berk, S. F. 1985. *The Gender Factory: The Apportionment of Work in American Households*. Springer US.
- Bianchi, Suzanne M., Melissa A. Milkie, Liana C. Sayer, and John P. Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces* 79(1):191–228.
- Billari, Francesco C., and Aart C. Liefbroer. 2010. "Towards a New Pattern of Transition to Adulthood?" *Advances in Life Course Research* 15(2):59–75.
- Billari, Francesco, Tomas Frejka, John Hobcraft, Miloslav Macura, and Dirk J. van de Kaa. 2004. "Discussion of Paper 'Explanations of the Fertility Crisis in Modern Societies: A Search for Commonalities', Population Studies 57(3): 241–263, by John Caldwell and Thomas Schindlmayr." *Population Studies* 58(1):77–92.
- Bilsky, W., M. Janik, and S. H. Schwartz. 2011. "The Structural Organization of Human Values-Evidence from Three Rounds of the European Social Survey (ESS)." *Journal of Cross-Cultural Psychology* 42(5):759–76.
- Bittman, Michael, Paula England, Liana Sayer, Nancy Folbre, and George Matheson. 2003. "When Does Gender Trump Money? Bargaining and Time in Household Work." *American Journal of Sociology* 109(1):186–214.
- Block, Katharina, Antonya Marie Gonzalez, Toni Schmader, and Andrew Scott Baron. 2018. "Early Gender Differences in Core Values Predict Anticipated Family Versus Career Orientation." *Psychological Science* 29(9):1540–47.
- Blood, R. O. J., and D. M. Wolfe. 1960. *Husbands and Wives: The Dynamics of Married Living*. Glencoe, IL: Free Press.
- Blossfeld, Hans-Peter. 2005. *Globalization, Uncertainty and Youth in Society*. Routledge.
- Blossfeld, Hans-Peter, and Catherine Hakim, eds. 1997. *Between Equalization and Marginalization: Women Working Part-Time in Europe and the United States of America*. New York: Oxford University Press.
- Blossfeld, Hans-Peter, and Heather Hofmeister. 2006. *Globalization, Uncertainty and Women's Careers: An International Comparison*. Edward Elgar Publishing.
- Blossfeld, Hans-Peter, and Johannes Huinink. 1991. "Human Capital Investments or Norms of Role Transition? How Women's Schooling and Career Affect the Process of Family Formation." *American Journal of Sociology* 97(1):143–68.
- Blossfeld, Hans-peter, and Kathleen Kiernan. 1995. *The New Role Of Women: Family Formation In Modern Societies*. 1 edition. Boulder: Westview Press.
- Boer, Diana, and Klaus Boehnke. 2015. "What Are Values? Where Do They Come from? A Developmental Perspective." Pp. 129–52 in *Handbook of Value*, edited by T. Brosch and D. Sander. Oxford University Press.

- Borg, Ingwer. 2019. "Age- and Gender-Related Differences in the Structure and the Meaning of Personal Values." *Personality and Individual Differences* 138:336–43.
- Borg, Ingwer, and Anat Bardi. 2016. "Should Ratings of the Importance of Personal Values Be Centered?" *Journal of Research in Personality* 63:95–101.
- Borg, Ingwer, Dieter Hermann, Wolfgang Bilsky, and Andreas Pöge. 2019. "Do the PVQ and the IRVS Scales for Personal Values Support Schwartz's Value Circle Model or Klages' Value Dimensions Model?" *Measurement Instruments for the Social Sciences* 1(1):3.
- Borg, Ingwer, Patrick Mair, and Patrick JF Groenen. 2018. *Applied Multidimensional Scaling and Unfolding*. 2nd ed. New York, NY: Springer Berlin Heidelberg.
- Bourdieu, Pierre. 1986. *Distinction: A Social Critique of the Judgement of Taste*. London: Routledge & Kegan Paul.
- Braithwaite, VA. 1994. "Beyond Rokeach's Equality-Freedom Model: Two Dimensional Values in a One-Dimensional World." *Journal of Social Issues* 50(4):67–94.
- Braithwaite, VA, and WA Scott. 1991. "Values." Pp. 661–753 in *Measures of Personality and Social Psychological Attitudes*, edited by J. Robinson, P. Shaver, and L. Wrightsman. New York: Academic.
- Braithwaite, Valerie A., and H. G. Law. 1985. "Structure of Human Values: Testing the Adequacy of the Rokeach Value Survey." *Journal of Personality and Social Psychology* 49(1):250–63.
- Breen, R., R. Luijkx, W. Muller, and R. Pollak. 2010. "Long-Term Trends in Educational Inequality in Europe: Class Inequalities and Gender Differences." *European Sociological Review* 26(1):31–48.
- Breen, Richard, ed. 2004. *Social Mobility in Europe*. Oxford University Press.
- Breen, Richard, Ruud Luijkx, Walter Müller, and Reinhard Pollak. 2009. "Nonpersistent Inequality in Educational Attainment: Evidence from Eight European Countries." *American Journal of Sociology* 114(5):1475–1521.
- Buchmann, Marlis C., and Irene Kriesi. 2011. "Transition to Adulthood in Europe." *Annual Review of Sociology* 37(1):481–503.
- Burroughs, James E., and Aric Rindfleisch. 2002. "Materialism and Well-Being: A Conflicting Values Perspective." *Journal of Consumer Research* 29(3):348–70.
- Callero, Peter L. 2014. "Self, Identity, and Social Inequality." Pp. 273–94 in *Handbook of the Social Psychology of Inequality, Handbooks of Sociology and Social Research*, edited by J. D. McLeod, E. J. Lawler, and M. Schwalbe. Springer Netherlands.
- CBS, Centraal Bureau voor de Statistiek. 2020. "Arbeidsdeelname En Werkloosheid per Maand." *CBS Statline*. Retrieved March 5, 2020

(<https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80590ned/table?ts=1583407473318>).

- Cech, Erin A. 2013. "The Self-Expressive Edge of Occupational Sex Segregation." *American Journal of Sociology* 119(3):747–89.
- Centraal Bureau voor de Statistiek. 2010. *Terugblikken: een eeuw in statistieken*. Den Haag: Centraal Bureau voor de Statistiek.
- Chan, Wai. 2003. "Analyzing Ipsative Data in Psychological Research." *Behaviormetrika* 30(1):99–121.
- Charles, Maria, and Karen Bradley. 2009. "Indulging Our Gendered Selves? Sex Segregation by Field of Study in 44 Countries." *American Journal of Sociology* 114(4):924–76.
- Charles, Maria, and David B. Grusky. 2004. *Occupational Ghettos: The Worldwide Segregation of Women and Men*. Stanford, Calif.: Stanford University Press.
- Cherlin, Andrew J. 2004. "The Deinstitutionalization of American Marriage." *Journal of Marriage and Family* 66(4):848–61.
- Chirkov, Valery, Richard M. Ryan, Youngmee Kim, and Ulas Kaplan. 2003. "Differentiating Autonomy from Individualism and Independence: A Self-Determination Theory Perspective on Internalization of Cultural Orientations and Well-Being." *Journal of Personality and Social Psychology* 84(1):97.
- Cieciuch, Jan, Eldad Davidov, and René Algesheimer. 2016. "The Stability and Change of Value Structure and Priorities in Childhood: A Longitudinal Study: Values in Childhood." *Social Development* 25(3):503–27.
- Cieciuch, Jan, Eldad Davidov, Michele Vecchione, and Shalom H. Schwartz. 2014. "A Hierarchical Structure of Basic Human Values in a Third-Order Confirmatory Factor Analysis." *Swiss Journal of Psychology*.
- Clarkberg, Marin, Ross M. Stolzenberg, and Linda J. Waite. 1995. "Attitudes, Values, and Entrance into Cohabitational versus Marital Unions." *Social Forces* 74(2):609–32.
- Coltrane, Scott. 2000. "Research on Household Labor: Modeling and Measuring the Social Embeddedness of Routine Family Work." *Journal of Marriage and Family* 62(4):1208.
- Consiglio, C., R. Cenciotti, L. Borgogni, G. Alessandri, and S. H. Schwartz. 2016. "The WVal: A New Measure of Work Values." *Journal of Career Assessment*.
- Coontz, Stephanie. 2006. *Marriage, a History: How Love Conquered Marriage*. Reprint edition. New York, NY: Penguin Books.
- Correll, Shelley J. 2004. "Constraints into Preferences: Gender, Status, and Emerging Career Aspirations." *American Sociological Review* 69(1):93–113.

- Cotter, David, Joan M. Hermsen, and Reeve Vanneman. 2011. "The End of the Gender Revolution? Gender Role Attitudes from 1977 to 2008." *American Journal of Sociology* 117(1):259–89.
- Cunningham, Mick. 2007. "Influences of Women's Employment on the Gendered Division of Household Labor over the Life Course - Evidence from a 31-Year Panel Study." *Journal of Family Issues* 28(3):422–44.
- Daniel, Ella, and Maya Benish-Weisman. 2019. "Value Development during Adolescence: Dimensions of Change and Stability." *Journal of Personality* 87(3):620–32.
- Davidov, Eldad, Bart Meuleman, Jan Cieciuch, Peter Schmidt, and Jaak Billiet. 2014. "Measurement Equivalence in Cross-National Research." *Annual Review of Sociology* 40:55–75.
- Davidov, Eldad, Bengt Muthen, and Peter Schmidt. 2018. "Measurement Invariance in Cross-National Studies: Challenging Traditional Approaches and Evaluating New Ones." *Sociological Methods & Research* 47(4):631–36.
- Davis, Shannon N., and Theodore N. Greenstein. 2009. "Gender Ideology: Components, Predictors, and Consequences." *Annual Review of Sociology* 35:87–105.
- De Graaf, Paul, and Hedwig Vermeulen. 1997. "Female Labour-Market Participation in the Netherlands: Developments in the Relationship between Family Cycle and Employment." Pp. 191–209 in *Between Equalization and Marginalization: Women Working Part-time in Europe and the United States of America*, edited by H.-P. Blossfeld and C. Hakim. Oxford (UK): Oxford University Press.
- Dechant, Anna, and Hans-Peter Blossfeld. 2015. "Changes in the Division of Labor within Highly Educated German Couples When the First Child Is Born." *Zeitschrift Fur Familienforschung* 27(3):373–96.
- Deci, Edward L. 1975. *Intrinsic Motivation*. Plenum Publishing Company Limited.
- Deci, Edward L., and Richard M. Ryan. 2000. "The 'What' and 'Why' of Goal Pursuits: Human Needs and the Self-Determination of Behavior." *Psychological Inquiry* 11(4):227–68.
- DiMaggio, Paul. 1997. "Culture and Cognition." *Annual Review of Sociology* 23(1):263–287.
- Diprete, Thomas A., Paul M. De Graaf, Ruud Luijkx, Michael Tählin, and Hans-Peter Blossfeld. 1997. "Collectivist versus Individualist Mobility Regimes? Structural Change and Job Mobility in Four Countries." *American Journal of Sociology* 103(2):318–58.
- Dobewall, Henrik, and Maksim Rudnev. 2014. "Common and Unique Features of Schwartz's and Inglehart's Value Theories at the Country and Individual Levels." *Cross-Cultural Research* 48(1):45–77.
- Dobewall, Henrik, Raul Tormos, and Melanie Vauclair. 2017. "Normative Value Change Across the Human Life Cycle: Similarities and Differences Across Europe." *Journal of Adult Development*.

- Elder, Glen H., Monica Kirkpatrick Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3–19 in *Handbook of the Life Course, Handbooks of Sociology and Social Research*, edited by J. T. Mortimer and M. J. Shanahan. Boston, MA: Springer US.
- Ellemers, Naomi. 2018. "Gender Stereotypes." *Annual Review of Psychology* 69(1):275–98.
- Elzinga, Cees H., and Aart C. Liefbroer. 2007. "De-Standardization of Family-Life Trajectories of Young Adults: A Cross-National Comparison Using Sequence Analysis." *European Journal of Population/Revue Européenne de Démographie* 23(3–4):225–250.
- England, Paula. 2010. "The Gender Revolution: Uneven and Stalled." *Gender & Society* 24(2):149–166.
- Erikson, E. H. 1959. *Identity and the Life Cycle: Selected Papers*. Oxford, England: International Universities Press.
- Erikson, Erik H. 1982. *The Life Cycle Completed: A Review*. 1st ed. New York: Norton.
- Erikson, Robert. 1984. "Social Class of Men, Women and Families." *Sociology* 18(4):500–514.
- Erikson, Robert, John H. Goldthorpe, and Lucienne Portocarero. 1979. "Intergenerational Class Mobility in Three Western European Societies: England, France and Sweden." *The British Journal of Sociology* 30(4):415.
- Esping-Andersen, Gosta. 2009. *Incomplete Revolution: Adapting Welfare States to Women's New Roles*.
- European Social Survey Cumulative File, ESS 1. 7. 2016. "Data File Edition 1.0."
- Evertsson, Marie. 2014. "Gender Ideology and the Sharing of Housework and Child Care in Sweden." *Journal of Family Issues* 35(7):927–49.
- EVS. 2010. *European Values Study 2008: Netherlands (EVS 2008)*. Version 1.1.0. GESIS Data Archive, Cologne.
- Fallding, Harold. 1965. "A Proposal for the Empirical Study of Values." *American Sociological Review* 30(2):223–33.
- Fausser, Sophia. 2019. "Time Availability and Housework: The Effect of Unemployment on Couples' Hours of Household Labor." *Social Science Research* 83:102304.
- Feather, N. T., and E. R. Peay. 1975. "The Structure of Terminal and Instrumental Values: Dimensions and Clusters." *Australian Journal of Psychology* 27(2):151–64.
- Feijten, Peteke, and Clara H. Mulder. 2002. "The Timing of Household Events and Housing Events in the Netherlands: A Longitudinal Perspective." *Housing Studies* 17(5):773–92.
- Fischer, R. 2017. "From Values to Behaviour and from Behaviour to Values." Pp. 219–35 in *Values and Behaviour. Taking a cross-cultural perspective*, edited by S. Roccas and L. Sagiv. Berlin: Springer.

- Folbre, Nancy. 2012. "Should Women Care Less? Intrinsic Motivation and Gender Inequality." *British Journal of Industrial Relations* 50(4):597–619.
- Gauthier, Anne, and Frank de Kleine. 2014. "100 jaar zwangerschapsverlof in Nederland." *demos* 30(9):4.
- Gere, Judith, and Geoff MacDonald. 2010. "An Update of the Empirical Case for the Need to Belong." *The Journal of Individual Psychology* 66(1):93–115.
- Gershuny, Jonathan. 2003. *Changing Times: Work and Leisure in Postindustrial Society*. Oxford University Press.
- Gibbins, Keith, and Iain Walker. 1993. "Multiple Interpretations of the Rokeach Value Survey." *Journal of Social Psychology* 133(6):797–805.
- Giddens, Anthony. 1992a. *The Constitution of Society: Outline of the Theory of Structuration*. Reprint Edition. Berkeley: Univ of California Pr.
- Giddens, Anthony. 1992b. *The Transformation of Intimacy: Sexuality, Love, and Eroticism in Modern Societies*. Cambridge, UK: Polity Press.
- van Gils, Wouter, and Gerbert Kraaykamp. 2008. "The Emergence of Dual-Earner Couples: A Longitudinal Study of the Netherlands." *International Sociology* 23(3):345–66.
- Goldman, Brian Middleton, and Michael H. Kernis. 2002. "The Role of Authenticity in Healthy Psychological Functioning and Subjective Well-Being." *Annals of the American Psychotherapy Association* 5(6):18–20.
- Gough, Margaret, and Alexandra Killewald. 2011. "Unemployment in Families: The Case of Housework." *Journal of Marriage and Family* 73(5):1085–1100.
- Gouveia, Valdiney V., Taciano L. Milfont, and Valeschka M. Guerra. 2014. "Functional Theory of Human Values: Testing Its Content and Structure Hypotheses." *Personality and Individual Differences* 60:41–47.
- Greenwald, Anthony G., Debbie E. McGhee, and Judah L. Schwartz. 1998. "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test." *Journal of Personality and Social Psychology* 74(6):1464–80.
- Grunow, Daniela. 2019. "Comparative Analyses of Housework and Its Relation to Paid Work: Institutional Contexts and Individual Agency." *KZfSS Kölner Zeitschrift Für Soziologie Und Sozialpsychologie* 71(1):247–84.
- Grunow, Daniela, and Nina Baur. 2014. "The Association between Norms and Actions The Case of Men's Participation in Housework." *Comparative Population Studies* 39(3).
- Grunow, Daniela, Katia Begall, and Sandra Buchler. 2018. "Gender Ideologies in Europe: A Multidimensional Framework." *Journal of Marriage and Family* 80(1):42–60.

- Grunow, Daniela, and Marie Evertsson, eds. 2019. *New Parents in Europe: Work-Care Practices, Gender Norms and Family Policies*. Northampton, MA: Edward Elgar Pub.
- Grunow, Daniela, Florian Schulz, and Hans-Peter Blossfeld. 2007. "What explains the process of traditionalization in the division of household labor: Social norms or economic resources?" *Zeitschrift Fur Soziologie* 36(3):162–81.
- Grunow, Daniela, Florian Schulz, and Hans-Peter Blossfeld. 2012. "What Determines Change in the Division of Housework over the Course of Marriage?" *International Sociology* 27(3):289–307.
- Gupta, Sanjiv. 2007. "Autonomy, Dependence, or Display? The Relationship Between Married Women's Earnings and Housework." *Journal of Marriage and Family* 69(2):399–417.
- Güveli, Ayse, Ruud Luijkx, and Harry B. G. Ganzeboom. 2012. "Patterns of Intergenerational Mobility of the Old and New Middle Classes in a Post-Industrial Society: Netherlands 1970–2006." *Social Science Research* 41(2):224–41.
- Güveli, Ayse, Ariana Need, and Nan Dirk De Graaf. 2007. "The Rise of 'New' Social Classes within the Service Class in The Netherlands Political Orientation of Social and Cultural Specialists and Technocrats between 1970 and 2003." *Acta Sociologica* 50(2):129–146.
- Haidt, Jonathan. 2001. "The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment." *Psychological Review* 108(4):814.
- Hakim, Catherine. 2000. *Work-Lifestyle Choices in the 21st Century: Preference Theory*. Oxford (UK): Oxford University Press.
- Hanel, Paul H. P., Katia C. Vione, Ulrike Hahn, and Gregory R. Maio. 2017. "Value Instantiations: The Missing Link Between Values and Behavior?" Pp. 175–90 in *Values and Behavior*, edited by S. Roccas and L. Sagiv. Springer, Cham.
- Härkönen, Juho, and Erik Bihagen. 2011. "Occupational Attainment and Career Progression in Sweden." *European Societies* 13(3):451–79.
- Hart, Joep de. 2014. *Geloven binnen en buiten verband. Godsdienstige ontwikkelingen in Nederland*. Den Haag: Sociaal en Cultureel Planbureau.
- Harter, Susan, and William M. Bukowski. 2012. *The Construction of the Self: Developmental and Sociocultural Foundations*. 2. ed. New York, NY: Guilford Press.
- Hendrickx, John, Wim Bernasco, and Paul M. de Graaf. 2001. "Couples' Labour Market Participation in the Netherlands." in *Careers of couples in contemporary societies: from male breadwinner to dual-earner families*, edited by H.-P. Blossfeld and S. Drobnic. Oxford [UK]: New York: Oxford University Press.
- Hertel, Florian R. 2017. *Social Mobility in the 20th Century: Class Mobility and Occupational Change in the United States and Germany*. Springer VS.

- Herzog, A. Regula. 1982. "High School Seniors' Occupational Plans and Values: Trends in Sex Differences 1976 through 1980." *Sociology of Education* 55(1):1.
- Higgins, E. Tory. 1987. "Self-Discrepancy: A Theory Relating Self and Affect." *Psychological Review* 94(3):319–40.
- Higgins, E. Tory. 1997. "Beyond Pleasure and Pain." *American Psychologist* 52(12):1280.
- Hitlin, Steven. 2003. "Values as the Core of Personal Identity: Drawing Links between Two Theories of Self." *Social Psychology Quarterly* 118–137.
- Hitlin, Steven. 2011. "Values, Personal Identity, and the Moral Self." Pp. 515–529 in *Handbook of Identity Theory and Research*. Springer.
- Hochschild, Arlie Russell, and Anne Machung. 2003. *The Second Shift*. New York: Penguin Books.
- Hook, Jennifer L. 2010. "Gender Inequality in the Welfare State: Sex Segregation in Housework, 1965–2003." *American Journal of Sociology* 115(5):1480–1523.
- Hook, Jennifer L. 2017. "Women's Housework: New Tests of Time and Money." *Journal of Marriage and Family* 79(1):179–98.
- House, James S. 1981. "Social Structure and Personality." Pp. 525–61 in *Social Psychology: Sociological Perspectives.*, edited by M. Rosenberg and R. H. Turner. New York: Basic Books.
- Hu, Li-tze, and Peter M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives." *Structural Equation Modeling: A Multidisciplinary Journal* 6(1):1–55.
- Huta, Veronika, and Alan S. Waterman. 2014. "Eudaimonia and Its Distinction from Hedonia: Developing a Classification and Terminology for Understanding Conceptual and Operational Definitions." *Journal of Happiness Studies* 15(6):1425–56.
- Hutcheon, Pat Duffy. 1972. "Value Theory: Towards Conceptual Clarification." *The British Journal of Sociology* 23(2):172–87.
- IBO. 2019. *De(el)tijd zal het leren: Van analyse naar beleid over deeltijd*. edited by Interdepartmentaal Beleidsonderzoek. Den Haag: Ministerie van Financiën.
- Inglehart, R., A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin, and B. Puranen, eds. 2014. *World Values Survey: Round Six - Country-Pooled Datafile*. Madrid: JD Systems Institute.
- Inglehart, Ronald. 1977. *The Silent Revolution Changing Values and Political Styles among Western Publics*. Princeton University Press.
- Inglehart, Ronald. 1990. *Culture Shift in Advanced Industrial Society*. Princeton, N.J: Princeton University Press.

- Inglehart, Ronald, and Christian Welzel. 2005. *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. Leiden: Cambridge University Press.
- ISSP Research Group. 2017. "International Social Survey Programme: Work Orientations IV."
- Jansen, Miranda, and Aart C. Liefbroer. 2006. "Couples' Attitudes, Childbirth, and the Division of Labor." *Journal of Family Issues* 27(11):1487–1511.
- Jaspers, Esther D. T., and Rik G. M. Pieters. 2016. "Materialism across the Life Span: An Age-Period-Cohort Analysis." *Journal of Personality and Social Psychology* 111(3):451–73.
- Jennissen, Roel Peter Wilhelmina, ed. 2011. *De Nederlandse migratiekaart: achtergronden en ontwikkelingen van verschillende internationale migratietypen*. Den Haag: Boom Juridische Uitgevers: Wetenschappelijk Onderzoek- en Documentatiecentrum, Ministerie van Veiligheid en Justitie.
- Jin, Jing, and James Rounds. 2012. "Stability and Change in Work Values: A Meta-Analysis of Longitudinal Studies." *Journal of Vocational Behavior* 80(2):326–339.
- Johnson, Monica Kirkpatrick. 2001a. "Change in Job Values During the Transition to Adulthood." *Work and Occupations* 28(3):315–45.
- Johnson, Monica Kirkpatrick. 2001b. "Job Values in the Young Adult Transition: Change and Stability with Age." *Social Psychology Quarterly* 64(4):297–317.
- Johnson, Monica Kirkpatrick. 2002. "Social Origins, Adolescent Experiences, and Work Value Trajectories during the Transition to Adulthood." *Social Forces* 80(4):1307–40.
- Johnson, Monica Kirkpatrick, and Glen H. Elder. 2002. "Educational Pathways and Work Value Trajectories." *Sociological Perspectives* 45(2):113–138.
- Johnson, Monica Kirkpatrick, and Jeylan T. Mortimer. 2015. "Reinforcement or Compensation? The Effects of Parents' Work and Financial Conditions on Adolescents' Work Values during the Great Recession." *Journal of Vocational Behavior* 87:89–100.
- Johnson, Monica Kirkpatrick, Rayna Amber Sage, and Jeylan T. Mortimer. 2012. "Work Values, Early Career Difficulties, and the U.S. Economic Recession." *Social Psychology Quarterly* 75(3):242–67.
- Johnston, Charles S. 1995. "The Rokeach Value Survey: Underlying Structure and Multidimensional Scaling." *Journal of Psychology* 129(5):583–597.
- Jonsson, Jan O., David B. Grusky, Matthew Di Carlo, Reinhard Pollak, and Mary C. Brinton. 2009. "Microclass Mobility: Social Reproduction in Four Countries." *American Journal of Sociology* 114(4):977–1036.
- Kan, Man Yee. 2008. "Measuring Housework Participation: The Gap between 'Stylised' Questionnaire Estimates and Diary-Based Estimates." *Social Indicators Research* 86(3):381–400.

- Kandler, Christian, Juliana Gottschling, and Frank M. Spinath. 2016. "Genetic and Environmental Parent–Child Transmission of Value Orientations: An Extended Twin Family Study." *Child Development* 87(1):270–284.
- Kasser, Tim. 2002. "Sketches for a Self-Determination Theory of Values." Pp. 123–40 in *Handbook of Self-Determination Theory*, edited by E. L. Deci and R. M. Ryan. Rochester NY: University of Rochester Press.
- Keizer, Renske, and Nicole Hiekel. 2015. "Risk-Avoidance or Utmost Commitment.: Dutch Focus Group Research on Views on Cohabitation and Marriage." *Demographic Research* 32:311–40.
- Khoudja, Yassine, and Fenella Fleischmann. 2015. "Ethnic Differences in Female Labour Force Participation in the Netherlands: Adding Gender Role Attitudes and Religiosity to the Explanation." *European Sociological Review* 31(1):91–102.
- Khoudja, Yassine, and Fenella Fleischmann. 2017. "Labor Force Participation of Immigrant Women in the Netherlands: Do Traditional Partners Hold Them Back?" *International Migration Review* 51(2):506–41.
- Kluckhohn, Clyde. 1951. "Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification." in *Toward a General Theory of Action*, edited by T. Parsons and E. A. Shils. Berlin, Boston: De Gruyter.
- Kluckhohn, Florence, and Fred L. Strodtbeck. 1973. *Variations in Value Orientations*. New edition. Westport, Conn: Greenwood Press.
- Klute, Mary Maguire, Ann C. Crouter, Aline G. Sayer, and Susan M. McHale. 2002. "Occupational Self-Direction, Values, and Egalitarian Relationships: A Study of Dual-Earner Couples." *Journal of Marriage and Family* 64(1):139–51.
- Knafo, Ariel, and Lilach Sagiv. 2004. "Values and Work Environment: Mapping 32 Occupations." *European Journal of Psychology of Education* 19(3):255–73.
- Knafo, Ariel, and Shalom H. Schwartz. 2001. "Value Socialization in Families of Israeli-Born and Soviet-Born Adolescents in Israel." *Journal of Cross-Cultural Psychology* 32(2):213–228.
- Knight, Carly R., and Mary C. Brinton. 2017. "One Egalitarianism or Several? Two Decades of Gender-Role Attitude Change in Europe." *American Journal of Sociology* 122(5):1485–1532.
- Kohn, Melvin. 1989. *Class and Conformity: A Study in Values*. University of Chicago Press.
- Kohn, Melvin L. 1959. "Social Class and Parental Values." *American Journal of Sociology* 64(4):337–51.
- Kohn, Melvin L., and Carmi Schooler. 1969. "Class, Occupation, and Orientation." *American Sociological Review* 34(5):659–678.

- Kohn, Melvin L., and Carmi Schooler. 1983. *Work and Personality: An Inquiry into the Impact of Social Stratification*. Norwood, N.J: Ablex Pub. Corp.
- Kohn, Melvin L., and Kazimierz M. Slomczynski. 1990. *Social Structure and Self-Direction: A Comparative Analysis of the United States and Poland*. Illustrated edition. Cambridge, Mass., USA: Blackwell Pub.
- Koltko-Rivera, Mark E. 2006. "Rediscovering the Later Version of Maslow's Hierarchy of Needs: Self-Transcendence and Opportunities for Theory, Research, and Unification." *Review of General Psychology* 10(4):302–17.
- Konty, Mark A., and Charlotte Chorn Dunham. 1997. "Differences in Value and Attitude Change over the Life Course." *Sociological Spectrum* 17(2):177–97.
- Kraaykamp, Gerbert. 2012. "Employment Status and Family Role Attitudes: A Trend Analysis for the Netherlands." *International Sociology* 27(3):308–29.
- Kühhirt, Michael. 2012. "Childbirth and the Long-Term Division of Labour within Couples: How Do Substitution, Bargaining Power, and Norms Affect Parents' Time Allocation in West Germany?" *European Sociological Review* 28(5):565–82.
- Lenton, Alison P., Martin Bruder, Letitia Slabu, and Constantine Sedikides. 2013. "How Does 'Being Real' Feel? The Experience of State Authenticity: State Authenticity." *Journal of Personality* 81(3):276–89.
- Leopold, Thomas, Jan Skopek, and Florian Schulz. 2018. "Gender Convergence in Housework Time: A Life Course and Cohort Perspective." *Sociological Science* 5:281–303.
- Lesthaeghe, R., and G. Moors. 2002. "Life Course Transitions and Value Orientations: Selection and Adaptation." P. 40 in *Meaning and Choice: Value Orientations and Life Course Decisions.*, edited by R. Lesthaeghe. The Hague and Brussels: NIDI-CBGS publications.
- Lesthaeghe, R., and D. Van de Kaa. 1986. "Twee Demografische Transitities?" Pp. 9–24 in *Bevolking-Groei en Krimp, Mens en Maatschappij*, edited by R. Lesthaeghe and D. Van de Kaa. Deventer, The Netherlands: Van Loghum Slaterus.
- Lesthaeghe, Ron. 1991. *The Second Demographic Transition in Western Countries: An Interpretation. IDP working paper*. Brussel: Vrije Universiteit.
- Lesthaeghe, Ron. 2010. "The Unfolding Story of the Second Demographic Transition." *Population and Development Review* 36(2):211–51.
- Lesthaeghe, Ron, and Guy Moors. 1995. "Living Arrangements, Socio-Economic Position, and Values among Young Adults: A Pattern Description for Belgium, France, the Netherlands, and West-Germany, 1990." Pp. 1–56 in *Population and family in the Low Countries 1994*. Springer.

- Lesthaeghe, Ron, and Guy Moors. 2002. "Life Course Transitions and Value Orientations: Selection and Adaptation." *Meaning and Choice: Value Orientations and Life Course Decisions* 37:1–44.
- Liefbroer, Aart C. 1999. "From Youth to Adulthood: Understanding Changing Patterns of Family Formation from a Life Course Perspective." Pp. 53–85 in *Population Issues: An Interdisciplinary Focus, The Plenum Series on Demographic Methods and Population Analysis*, edited by L. J. G. van Wissen and P. A. Dykstra. Dordrecht: Springer Netherlands.
- Liefbroer, Aart C. 2005. "The Transition from Youth to Adulthood in the Netherlands." Pp. 82–103 in *Globalization, Uncertainty and Youth in Society*, edited by H.-P. Blossfeld, E. Klijzing, M. Mills, and K. Kurz. New York, NY: Routledge.
- Liefbroer, Aart C., and Martine Corijn. 1999. "Who, What, Where, and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation." *European Journal of Population/Revue Européenne de Démographie* 15(1):45–75.
- Liefbroer, Aart C., and Pearl A. Dykstra. 2000. *Levenslopen in verandering. Een studie naar ontwikkelingen in de levenslopen van Nederlanders geboren tussen 1900 en 1970*. Wetenschappelijke Raad voor het Regeringsbeleid.
- Lindenberg, Siegwart. 2009. "Values: What Do They Do for Behaviour?" in *Raymond Boudon a life in sociology: essays in Honour of Raymond Boudon*. Vol. 3, edited by M. Cherkaoui and P. Hamilton. Oxford: Bardwell Press.
- Lindsay, Paul, and William E. Knox. 1984. "Continuity and Change in Work Values Among Young Adults: A Longitudinal Study." *American Journal of Sociology* 89(4):918–31.
- van der Lippe, Tanja, Judith Treas, and Lukas Norbutas. 2018. "Unemployment and the Division of Housework in Europe." *Work Employment and Society* 32(4):650–69.
- Lizardo, Omar, Robert Mowry, Brandon Sepulvado, Dustin S. Stoltz, Marshall A. Taylor, Justin Van Ness, and Michael Wood. 2016. "What Are Dual Process Models? Implications for Cultural Analysis in Sociology." *Sociological Theory* 34(4):287–310.
- Longest, Kyle C., Steven Hitlin, and Stephen Vaisey. 2013. "Position and Disposition Position and Disposition: The Contextual Development of Human Values." *Social Forces* 91(4):1499–1528.
- Lönnqvist, Jan-Erik, Sointu Leikas, and Markku Verkasalo. 2018. "Value Change in Men and Women Entering Parenthood: New Mothers' Value Priorities Shift towards Conservation Values." *Personality and Individual Differences* 120:47–51.
- Lorr, Maurice, Antanas Suziedelis, and Xenia Tonesk. 1973. "The Structure of Values: Conceptions of the Desirable." *Journal of Research in Personality* 7(2):139–47.
- Luijkx, Ruud, and Manon de Heus. 2008. "The Educational System of the Netherlands." Pp. 47–75 in *The International standard classification of education (ISCED-97): an*

- evaluation of content and criterion validity for 15 European countries*. Mannheim: Mannheimer Zentrum für Europäische Sozialforschung (MZES).
- Maio, Gregory R. 2010. "Mental Representations of Social Values." Pp. 1–43 in *Advances in experimental social psychology*. Vol. 42, edited by M. P. Zanna. Burlington: Academic Press.
- Mair, Patrick, Ingwer Borg, and Thomas Rusch. 2016. "Goodness-of-Fit Assessment in Multidimensional Scaling and Unfolding." *Multivariate Behavioral Research* 51(6):772–789.
- Mair, Patrick, Jan De Leeuw, Patrick J. F. Groenen, and Ingwer Borg. 2019. *Smacof: Multidimensional Scaling*.
- Manzoni, Anna, Juho Härkönen, and Karl Ulrich Mayer. 2014. "Moving on? A Growth-Curve Analysis of Occupational Attainment and Career Progression Patterns in West Germany." *Social Forces* 92(4):1285–1312.
- Marchand, Miquelle. 2013. "World Values Survey: Questionnaire Administered to the LISS Panel."
- Marcia, J. E. 1980. "Identity in Adolescence." in *Handbook of Adolescent Psychology*, edited by J. Adelson. New York: Wiley.
- Marini, Margaret Mooney, Pi-Ling Fan, Erica Finley, and Ann M. Beutel. 1996. "Gender and Job Values." *Sociology of Education* 69(1):49–65.
- Maslow, A. H. 1943. "A Theory of Human Motivation." *Psychological Review* 50(4):370–96.
- Maslow, Abraham Harold. 1999. *Toward a Psychology of Being*. 3. ed. New York: Wiley.
- Mayer, Karl Ulrich. 2009. "New Directions in Life Course Research." *Annual Review of Sociology* 35(1):413–33.
- McCrae, Robert R., and Paul T. Costa Jr. 1994. "The Stability of Personality: Observations and Evaluations." *Current Directions in Psychological Science* 3(6):173–75.
- Meuleman, Bart, Eldad Davidov, Peter Schmidt, and Jaak Billiet. 2012. "Social Location and Value Priorities. A European-Wide Comparison of the Relation between Social-Structural Variables and Human Values." Pp. 43–67 in *Society and Democracy in Europe*, edited by O. Gabriel and S. Keil. Routledge.
- Milfont, Taciano L., Petar Milojev, and Chris G. Sibley. 2016. "Values Stability and Change in Adulthood A 3-Year Longitudinal Study of Rank-Order Stability and Mean-Level Differences." *Personality and Social Psychology Bulletin* 42(5):572–88.
- Mills, Melinda. 2004. "Stability and Change: The Structuration of Partnership Histories in Canada, the Netherlands, and the Russian Federation." *European Journal of Population / Revue Européenne de Démographie* 20(2):141–75.

- Mills, Melinda, and Hans-Peter Blossfeld. 2013. "The Second Demographic Transition Meets Globalization: A Comprehensive Theory to Understand Changes in Family Formation in an Era of Rising Uncertainty." Pp. 9–33 in *Negotiating the Life Course: Stability and Change in Life Pathways, Life Course Research and Social Policies*, edited by A. Evans and J. Baxter. Dordrecht: Springer Netherlands.
- Molm, Linda, and Karen Cook. 1995. "Social Exchange and Exchange Networks." Pp. 209–35 in *Sociological Perspectives on Social Psychology*, edited by K. Cook, G. Fine, and J. House. Needham Heights, Mass: Allyn & Bacon.
- Moors, Guy. 2008. "The Valued Child. In Search of a Latent Attitude Profile That Influences the Transition to Motherhood." *European Journal of Population / Revue Européenne de Démographie* 24(1):33–57.
- Mooyaart, Jarl E., and Aart C. Liefbroer. 2016. "The Influence of Parental Education on Timing and Type of Union Formation: Changes Over the Life Course and Over Time in the Netherlands." *Demography* 53(4):885–919.
- Mortimer, Jeylan T. 1975. "Occupational Value Socialization in Business and Professional Families." *Sociology of Work and Occupations* 2(1):29–53.
- Mortimer, Jeylan T., and Jon Lorence. 1979. "Occupational Experience and the Self-Concept: A Longitudinal Study." *Social Psychology Quarterly* 42(4):307–23.
- Mortimer, Jeylan T., Jon Lorence, and Donald S. Kumka. 1986. *Work, Family, and Personality: Transition of Adulthood*. First Edition. Norwood, N.J: Praeger.
- Müller, Walter, and Markus Gangl, eds. 2003. *Transitions from Education to Work in Europe: The Integration of Youth into EU Labour Markets*. Oxford; New York: Oxford University Press.
- Munson, J. Michael, and Barry Z. Posner. 1980. "The Factorial Validity of a Modified Rokeach Value Survey for Four Diverse Samples." *Educational and Psychological Measurement* 40(4):1073–79.
- Neumeyer, Martin H. 1974. "Review of The Nature of Human Values." *Social Science* 49(2):118–19.
- Nitsche, Natalie, and Daniela Grunow. 2016. "Housework over the Course of Relationships: Gender Ideology, Resources, and the Division of Housework from a Growth Curve Perspective." *Advances in Life Course Research* 29:80–94.
- Nitsche, Natalie, and Daniela Grunow. 2018. "Do Economic Resources Play a Role in Bargaining Child Care in Couples? Parental Investment in Cases of Matching and Mismatching Gender Ideologies in Germany." *European Societies* 20(5):785–815.
- Oesch, Daniel. 2006. *Redrawing the Class Map: Stratification and Institutions in Britain, Germany, Sweden, and Switzerland*. Basingstoke: Palgrave Macmillan.

- Oppenheimer, Valerie Kincade. 1988. "A Theory of Marriage Timing." *American Journal of Sociology* 94(3):563–91.
- Poortman, Anne-Rigt, and Tanja Van Der Lippe. 2009. "Attitudes toward Housework and Child Care and the Gendered Division of Labor." *Journal of Marriage and Family* 71(3):526–41.
- Portegijs, W. 2008. *Verdeelde tijd: waarom vrouwen in deeltijd werken*. Den Haag: SCP, Sociaal en Cultureel Planbureau.
- Portegijs, W., and Marion van den Brakel. 2016. *Emancipatiemonitor 2016*.
- Ridgeway, Cecilia L. 2009. "Framed Before We Know It: How Gender Shapes Social Relations." *Gender and Society* 23(2):145–60.
- Ridgeway, Cecilia L. 2014. "Why Status Matters for Inequality." *American Sociological Review* 79(1):1–16.
- Ridgeway, Cecilia L., and Shelley J. Correll. 2004. "Unpacking the Gender System: A Theoretical Perspective on Gender Beliefs and Social Relations." *Gender and Society* 18(4):510–31.
- Rohan, Meg J. 2000. "A Rose by Any Name? The Values Construct." *Personality and Social Psychology Review* 4(3):255–77.
- Rokeach, Milton. 1973. *The Nature of Human Values*. New York; London: The Free Press; Collier MacMillan.
- Rokeach, Milton. 1979. *Understanding Human Values: Individual and Societal*. New York: The Free Press.
- Rosenberg, Morris. 1957. *Occupations and values*. Free Press.
- Ryan, Richard M., and Edward L. Deci. 2000. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25(1):54–67.
- Ryan, Richard M., and Edward L. Deci. 2006. "Self-Regulation and the Problem of Human Autonomy: Does Psychology Need Choice, Self-Determination, and Will?" *Journal of Personality* 74(6):1557–1586.
- Ryan, Richard M., Edward L. Deci, Wendy S. Grolnick, and Jennifer G. La Guardia. 2015. "The Significance of Autonomy and Autonomy Support in Psychological Development and Psychopathology." Pp. 795–849 in *Developmental Psychopathology*, edited by D. Cicchetti and D. J. Cohen. John Wiley & Sons, Inc.
- Sayer, Liana C. 2016. "Trends in Women's and Men's Time Use, 1965–2012: Back to the Future?" Pp. 43–77 in *Gender and Couple Relationships, National Symposium on Family Issues*, edited by S. M. McHale, V. King, J. Van Hook, and A. Booth. Cham: Springer International Publishing.

- Scarborough, William J., Ray Sin, and Barbara Risman. 2019. "Attitudes and the Stalled Gender Revolution: Egalitarianism, Traditionalism, and Ambivalence from 1977 through 2016." *Gender & Society* 33(2):173–200.
- Scherpenzeel, A. C., and M. Das. 2010. "'True' Longitudinal and Probability-Based Internet Panels: Evidence From the Netherlands." Pp. 77–104 in *Social and Behavioral Research and the Internet: Advances in Applied Methods and Research Strategies.*, edited by Das, M. and C. Kaczmirek. Boca Raton: Taylor & Francis.
- Schuman, Howard. 1975. "Review of The Nature of Human Values." *The Public Opinion Quarterly* 39(4):580–81.
- Schwartz, Shalom H. 1992. "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries." *Advances in Experimental Social Psychology* 25(1):1–65.
- Schwartz, Shalom H. 1994. "Are There Universal Aspects in the Structure and Contents of Human Values?" *Journal of Social Issues* 50(4):19–45.
- Schwartz, Shalom H. 2003. "A Proposal for Measuring Value Orientations across Nations." *Questionnaire Package of the European Social Survey* 259–290.
- Schwartz, Shalom H. 2015. "Basic Individual Values: Sources and Consequences." in *Handbook of Value*, edited by D. Sander and T. Brosch. Oxford:UK: Oxford University Press.
- Schwartz, Shalom H., and Wolfgang Bilsky. 1987. "Toward a Universal Psychological Structure of Human Values." *Journal of Personality and Social Psychology* 53(3):550–62.
- Schwartz, Shalom H., and Wolfgang Bilsky. 1990. "Toward a Theory of the Universal Content and Structure of Values: Extensions and Cross-Cultural Replications." *Journal of Personality and Social Psychology* 58(5):878.
- Schwartz, Shalom H., and Klaus Boehnke. 2004. "Evaluating the Structure of Human Values with Confirmatory Factor Analysis." *Journal of Research in Personality* 38(3):230–55.
- Schwartz, Shalom H., Jan Cieciuch, Michele Vecchione, Eldad Davidov, Ronald Fischer, Constanze Beierlein, Alice Ramos, Markku Verkasalo, Jan-Erik Lönnqvist, Kursad Demirutku, Ozlem Dirilen-Gumus, and Mark Konty. 2012. "Refining the Theory of Basic Individual Values." *Journal of Personality and Social Psychology* 103(4):663–88.
- Schwartz, Shalom H., Gila Melech, Arielle Lehmann, Steven Burgess, Mari Harris, and Vicki Owens. 2001. "Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement." *Journal of Cross-Cultural Psychology* 32(5):519–542.
- Schwartz, Shalom H., and Tammy Rubel. 2005. "Sex Differences in Value Priorities: Cross-Cultural and Multimethod Studies." *Journal of Personality and Social Psychology* 89(6):1010–28.

- Schwartz, Shalom H., and Tammy Rubel-Lifschitz. 2009. "Cross-National Variation in the Size of Sex Differences in Values: Effects of Gender Equality." *Journal of Personality and Social Psychology* 97(1):171.
- SER. 2011. *Werk maken van baan-baanmobiliteit. Advies*. 5. Den Haag: Sociaal-Economische Raad.
- Settersten, Richard A. 2003. "Age Structuring and the Rhythm of the Life Course." Pp. 81–98 in *Handbook of the Life Course, Handbooks of Sociology and Social Research*, edited by J. T. Mortimer and M. J. Shanahan. Boston, MA: Springer US.
- Sewell, William H. 1992. "A Theory of Structure: Duality, Agency, and Transformation." *American Journal of Sociology* 98(1):1–29.
- Shelton, Beth Anne, and Daphne John. 1996. "The Division of Household Labor." *Annual Review of Sociology* 22(1):299–322.
- Skopek, Jan, and Thomas Leopold. 2019. "Explaining Gender Convergence in Housework Time: Evidence from a Cohort-Sequence Design." *Social Forces* 98(2):578–621.
- Smallenbroek, Oscar, John M. Zelenski, and Deanna C. Whelan. 2017. "Authenticity as a Eudaimonic Construct: The Relationships among Authenticity, Values, and Valence." *The Journal of Positive Psychology* 12(2):1–13.
- Sortheix, Florencia M., Philip D. Parker, Clemens M. Lechner, and Shalom H. Schwartz. 2019. "Changes in Young Europeans' Values During the Global Financial Crisis." *Social Psychological and Personality Science* 10(1):15–25.
- Spates, James L. 1983. "The Sociology of Values." *Annual Review of Sociology* 9:27–49.
- Spruyt, B., and T. Kuppens. 2014. "Warm, Cold, Competent or Incompetent? An Empirical Assessment of Public Perceptions of the Higher and Less Educated." *Current Sociology*.
- Studer, Matthias, Aart C. Liefbroer, and Jarl E. Mooyaart. 2018. "Understanding Trends in Family Formation Trajectories: An Application of Competing Trajectories Analysis (CTA)." *Advances in Life Course Research* 36:1–12.
- Sullivan, Oriel. 2011. "An End to Gender Display Through the Performance of Housework? A Review and Reassessment of the Quantitative Literature Using Insights From the Qualitative Literature." *Journal of Family Theory & Review* 3(1):1–13.
- Sullivan, Oriel, and Jonathan Gershuny. 2016. "Change in Spousal Human Capital and Housework: A Longitudinal Analysis." *European Sociological Review* 32(6):864–80.
- Sullivan, Oriel, Jonathan Gershuny, and John P. Robinson. 2018. "Stalled or Uneven Gender Revolution? A Long-Term Processual Framework for Understanding Why Change Is Slow: Stalled or Uneven Gender Revolution?" *Journal of Family Theory & Review* 10(1):263–79.

- Surkyn, Johan, and Ron Lesthaeghe. 2004a. "Value Orientations and the Second Demographic Transition (SDT) in Northern, Western and Southern Europe: An Update." *Demographic Research Special* 3:45–86.
- Surkyn, Johan, and Ron Lesthaeghe. 2004b. "Value Orientations and the Second Demographic Transition (SDT) in Northern, Western and Southern Europe: An Update." *Demographic Research* S3:45–86.
- Thibault Landry, Anaïs, Julian Kindlein, Sarah-Geneviève Trépanier, Jacques Forest, Drea Zigarmi, Dobie Houson, and Felix C. Brodbeck. 2016. "Why Individuals Want Money Is What Matters: Using Self-Determination Theory to Explain the Differential Relationship between Motives for Making Money and Employee Psychological Health." *Motivation and Emotion* 40(2):226–42.
- Thompson, Bruce, Justin E. Levitov, and Patrick A. Miederhoff. 1982. "Validity of the Rokeach Value Survey." *Educational and Psychological Measurement* 42(3):899–905.
- Thomson, Elizabeth, Maria Winkler-Dworak, and Sheela Kennedy. 2013. "The Standard Family Life Course: An Assessment of Variability in Life Course Pathways." Pp. 35–52 in *Negotiating the Life Course*. Vol. 1, edited by A. Evans and J. Baxter. Dordrecht: Springer Netherlands.
- Thornton, Arland, William G. Axinn, and Yu Xie. 2007. *Marriage and Cohabitation*. Chicago and London: The University of Chicago Press.
- Tschopp, Cécile, Anita C. Keller, and Barbara E. Stalder. 2015. "Work or Family or Both? Value Trajectories and Their Prediction over Ten Years." *Journal of Adolescence* 42:20–30.
- Uzefovsky, Florina, Anna K. Döring, and Ariel Knafo-Noam. 2015. "Values in Middle Childhood: Social and Genetic Contributions." *Social Development*.
- Vaisey, Stephen. 2009. "Motivation and Justification: A Dual-Process Model of Culture in Action." *American Journal of Sociology* 114(6):1675–1715.
- Van de Kaa, Dirk J. 1987. "Europe's Second Demographic Transition." *Population Bulletin* 42(1):1–59.
- Vecchione, Michele, Shalom Schwartz, Guido Alessandri, Anna K. Döring, Valeria Castellani, and Maria Giovanna Caprara. 2016. "Stability and Change of Basic Personal Values in Early Adulthood: An 8-Year Longitudinal Study." *Journal of Research in Personality*.
- Vecchione, Michele, Shalom Schwartz, Eldad Davidov, Jan Cieciuch, Guido Alessandri, and Gilda Marsicano. 2019. "Stability and Change of Basic Personal Values in Early Adolescence: A 2-year Longitudinal Study." *Journal of Personality*.
- Vleuten, Maaike van der, Eva Jaspers, Ineke Maas, and Tanja van der Lippe. 2016. "Boys' and Girls' Educational Choices in Secondary Education. The Role of Gender Ideology." *Educational Studies* 42(2):181–200.

- de Vos, Klaas. 2010. *Representativeness of the LISS-Panel 2008, 2009, 2010*. Tilburg: CentERdata.
- Warner, R. Stephen. 1976. "Review of The Nature of Human Values." *Contemporary Sociology* 5(1):13–16.
- Weeden, Kim A., and David B. Grusky. 2005. "The Case for a New Class Map." *American Journal of Sociology* 111(1):141–212.
- West, Candace, and Sarah Fenstermaker. 1995. "Doing Difference." *Gender & Society* 9(1):8–37.
- West, Candace, and Don H. Zimmerman. 1987. "Doing Gender." *Gender & Society* 1(2):125–151.
- Wielenga, Friso. 2012. *Geschiedenis van Nederland: Van de Opstand Tot Heden*. Amsterdam: Boom.
- Wolbers, Maarten H. J., Ruud Luijkx, and Wout Ultee. 2011. "Educational Attainment, Occupational Achievements, Career Peaks." *European Societies* 13(3):425–50.
- Zaidi, Batool, and S. Philip Morgan. 2017. "The Second Demographic Transition Theory: A Review and Appraisal." *Annual Review of Sociology* 43(1):473–92.
- Zimmermann, Okka, and Dirk Konietzka. 2018. "Social Disparities in Destandardization—Changing Family Life Course Patterns in Seven European Countries." *European Sociological Review* 34(1):64–78.
- Zwinkels, Wim, Daan Ooms, and Jos Sanders. 2009. "Omvang, aard en achtergronden van baan-baan-mobiliteit."

Appendix A Assessment of Self-reported Occupational Group in LISS

The job tasks measures come from the cross-sectional Dutch Skills Survey conducted by the LISS in 2017. This survey is not part of the Core LISS modules and was conducted on behalf of the Ministry of Social Affairs and Employment. The questionnaire was administered to 5,106 respondents in the LISS panel, 886 did not respond and 194 are incomplete. In total the sample includes 4220 individuals and 4026 complete responses.

Respondents presented with the following prompt: “You will receive questions about the activities which could be part of your current work. We aim to gain an overview of the types of tasks you perform in your work and how important these to do.” Respondents are then presented with a list of tasks and the instructions: “Indicate for each task how important the task is to your job”. All items are rated 1 “not at all important/not applicable” 2 “not very important” 3 “reasonably important” 4 “very important” and 5 “crucial”.

Items were picked based on their face validity to capture the three job task dimensions of interest. Exploratory Factor Analysis using the iterated principle factor method showed that each subsets of items created one factor. Objective complexity items create one factor with an eigen value of 2.93. All factor loadings were above 0.80. The bureaucratic items create one factor with an eigen value of 4.46. The factor loadings ranged from 0.73 – 0.91. The management items create one factor with an eigenvalue of 1.40 with factor loadings ranging from 0.67-0.69. Varimax rotation was applied to each solution and factor scores computed. Table A-1 shows the question working and their respective factors.

Table A-1: Job Task Factors, Questions and Question wording

Factor	Questions	Question wording
Objective Complexity	mv17a138- mv17a140	“Notice errors or problems” “solving problems” “analyzing problems”
Bureaucratic	mv17a144- mv17a149	“Reading and assessing forms” “reading and assessing short rapports, letters or memo’s” “reading and assessing long rapports, letters or memos” “Filling in forms” “writing short rapports, letters or memos” “writing long rapports, letters or memos”
Management	mv17a141- mv17a143	“Checking to prevent errors and problems” “planning your own tasks” “planning tasks of others”
Interaction	Mv17a121	“to interact with people”

Table A-2 shows differences in job tasks by self-identified occupational categories from the Dutch Skills survey (wave 2017) included in the LISS data. The survey questions ask how important a list of tasks is in their job on a scale of 1, not at all important/ not applicable, to 5, crucial. The objective complexity, management tasks and bureaucratic tasks are factors of several items with a mean of 0 and standard deviation of 1. The importance of interacting with people is a single item.

Table A-2: Self-identified occupation by mean importance of job tasks

Occupation	Objective Complexity	Management	Bureaucratic	Interaction
Higher				
Academic/Independent	0.37	0.09	0.40	4.02
Supervisory	0.47	0.50	0.64	4.21
Intermediate				
Academic/Independent	0.08	0.04	0.25	4.27
Supervisory/commercial	0.13	0.25	0.08	4.05
Other mental work	-0.12	-0.08	-0.10	3.87
Manual				
Supervisory and skilled	0.20	0.12	-0.26	3.63
Semi-skilled	-0.37	-0.32	-0.63	3.64
Unskilled and trained	-0.63	-0.54	-0.69	3.66
Agrarian profession	-0.49	-0.43	-0.82	3.02

The self-identified occupation does reasonably well in distinguishing between occupational tasks. The objective complexity distinguishes between tertiary and non-tertiary occupations (higher versus other occupations). Management tasks are highest in the supervisory professions. Bureaucratic tasks are more important in supervisory professions compared to the academic or independent profession.

The importance of interacting with people is similar in academic and supervisory professions. Thus, the demand to interact with individuals in egalitarian, transactional and hierarchical ways is not well distinguished and does not reflect the interpersonal, technical and organizational work logics. However, this variable does not measure exactly what is meant by the division in interaction between organizational and interpersonal occupations. The core issue is the way in which tasks structure interactions with others rather than interaction per se. Managers must control others while social professions work with clients and for clients. Thus, the interaction of managers is likely not to be benevolent while those of the academic professions is.

Table A-3 Self-Identified Occupation by Oesch Class

Oesch class	higher academic or indep. Prof.	higher supervisor prof.	Intermediate academic or independent profession	intermediate supervisory or commercial profession	other mental work	skilled and supervisory manual work	semi-skilled manual work	unskilled and trained manual work	agrarian	Total
1	2 1.23	11 6.40	0 0.00	2 0.65	1 0.18	0 0.00	0 0.00	0 0.00	0 0.00	16 0.73
2	8 4.91	0 0.00	1 0.18	1 0.32	1 0.18	0 0.00	0 0.00	0 0.00	0 0.00	11 0.50
3	7 4.29	10 5.81	5 0.89	14 4.55	1 0.18	4 2.30	2 1.30	0 0.00	6 23.08	49 2.22
4	0 0.00	0 0.00	0 0.00	1 0.32	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 0.05
5	36 22.09	5 2.91	20 3.57	17 5.52	26 4.70	3 1.72	1 0.65	0 0.00	0 0.00	108 4.90
6	11 6.75	5 2.91	36 6.42	18 5.84	19 3.44	18 10.34	11 7.14	0 0.00	1 3.85	119 5.40
7	1 0.61	0 0.00	13 2.32	4 1.30	11 1.99	92 52.87	49 31.82	8 8.51	13 50.00	191 8.66
8	0 0.00	0 0.00	1 0.18	1 0.32	4 0.72	6 3.45	28 18.18	24 25.53	2 7.69	66 2.99
9	37 22.70	100 58.14	57 10.16	76 24.68	40 7.23	5 2.87	1 0.65	1 1.06	0 0.00	317 14.38
10	11 6.75	15 8.72	30 5.35	54 17.53	103 18.63	4 2.30	1 0.65	2 2.13	1 3.85	221 10.02
11	3 1.84	10 5.81	27 4.81	51 16.56	224 40.51	13 7.47	17 11.04	10 10.64	0 0.00	355 16.10
12	0 0.00	0 0.00	1 0.18	3 0.97	15 2.71	1 0.57	1 0.65	2 2.13	0 0.00	23 1.04
13	33 20.25	3 1.74	55 9.80	2 0.65	4 0.72	1 0.57	0 0.00	0 0.00	0 0.00	98 4.44
14	12 7.36	8 4.65	240 42.78	14 4.55	24 4.34	3 1.72	2 1.30	0 0.00	0 0.00	303 13.74
15	1 0.61	4 2.33	54 9.63	35 11.36	40 7.23	11 6.32	14 9.09	6 6.38	3 11.54	168 7.62
16	1 0.61	1 0.58	21 3.74	15 4.87	40 7.23	13 7.47	27 17.53	41 43.62	0 0.00	159 7.21
Total	163 100.00	172 100.00	561 100.00	308 100.00	553 100.00	174 100.00	154 100.00	94 100.00	26 100.00	2205 100.00

Note: 1. Large Employers 2. Self-employed Professionals 3. Small Business owners with employees 4. Small Business owners without employees 5. Technical Experts 6. Technicians 7. Skilled Manual 8. Low-Skilled Manual 9. Higher-grade managers and administrators 10. Lower-grade managers and administrators 11. Skilled Clerks 12. Unskilled Clerks 13. Socio-Cultural Professionals 14. Socio-Cultural Semi-Professionals 15. Skilled Service 16. Low-skilled Service

Although the LISS data usually records self-identified occupation, the CentERdata institute coded occupational responses into ISCO for the 2012 wave. These allow, with the aid of employment relation variable (cw121) and the number of employees (cw410), to compare the self-identified occupations to the Oesch classes. Respondents were assigned an Oesch class using the code for round 6 of the European Social Survey, which is available on their website.

In Table A-3 the self-identified LISS occupation are tabulated with the 16 category Oesch Class schema. The cross tabulation shows substantial diversity in the accuracy of self-identified occupation. The higher academics are a mix, respondents of all work logics self-identified as higher academic or independent professionals. It is composed of one-third of each higher and associate Oesch class.

The higher supervisors are more accurate and homogenous, this occupational category comprises of two thirds higher and lower grade managers. The intermediate academic and professionals are 50% socio-cultural associate professionals, 15% associate managers and 13% service workers. The intermediate supervisors are 40% associate managers. The other mental category is 43% clerks and 25% associate managers 15% service workers. The skilled and supervisory manual occupation is composed of 50% production workers. The semi-skilled are also 50% production workers and 25% service workers. The unskilled are 50% service and 34% production workers. The agrarian are also 50% production workers.

Overall, the self-identified occupational categories are not very accurate in the work logic and sometimes also the skill level. The higher academic and independent professions are the worst in this regard, combining occupations from all three work logics. Most self-identified occupational categories did not make up more than 50% of the assumed occupations. It would be wise to choose a homogenous category for comparison in regression such as the intermediate academic or independent professions or the higher supervisory professions. Secondly, we can collapse the higher academic / independent professionals with the higher supervisory professions, as the technical experts and higher-grade managers number twice that of the socio-cultural professions, these both belong in the higher supervisory profession category.

Appendix B Descriptive Statistics, Fixed Effects and Population Averaged Logistic Models

Table B-1 Fixed Effects regressions of Values on Age (Men 31-55)

Model	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	Openness to Change				Achievement			
Age	-0.020*		-0.001		-0.027*		-0.005	
	(0.003)		(0.003)		(0.003)		(0.003)	
Mean rating			0.789*	0.788*			0.909*	0.911*
			(0.019)	(0.019)			(0.021)	(0.021)
higher academic x age		0.008		0.014		-0.038*		-0.031*
		(0.011)		(0.009)		(0.013)		(0.010)
higher supervisory x age		-0.008		-0.010		-0.011		-0.013
		(0.017)		(0.014)		(0.019)		(0.015)
intermediate academic x age		-0.015		0.000		-0.007		0.010
		(0.009)		(0.007)		(0.010)		(0.008)
intermediate supervisory x age		-0.014		-0.000		-0.022*		-0.006
		(0.008)		(0.007)		(0.009)		(0.007)
other mental work x age		-0.016*		-0.000		-0.024*		-0.005
		(0.007)		(0.005)		(0.008)		(0.006)
un/semi-skilled and supervisory manual x age		-0.032*		-0.003		-0.036*		-0.003
		(0.005)		(0.004)		(0.005)		(0.004)
Constant	0.858*	0.851*	-4.272*	-4.267*	1.172*	1.171*	-4.733*	-4.747*
	(0.138)	(0.138)	(0.166)	(0.167)	(0.154)	(0.154)	(0.181)	(0.181)
Observations	4,554	4,554	4,554	4,554	4,554	4,554	4,554	4,554
R-squared	0.014	0.018	0.369	0.370	0.020	0.023	0.399	0.401
Number of Respondents	1,532	1,532	1,532	1,532	1,532	1,532	1,532	1,532

Standard errors in parentheses, *p<0.05,

Table B-2 Fixed Effects regressions of Values on Age (Men 31-55)

Model	Benevolence				Conservation			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Age	-0.025*		-0.003		-0.012*		0.012*	
	(0.004)		(0.003)		(0.003)		(0.003)	
Mean Rating			0.893*	0.889*			0.974*	0.975*
			(0.022)	(0.022)			(0.020)	(0.020)
higher academic x age		0.012		0.019		0.005		0.013
		(0.013)		(0.010)		(0.013)		(0.009)
higher supervisory x age		0.018		0.016		0.000		-0.002
		(0.019)		(0.016)		(0.019)		(0.014)
intermediate academic x age		-0.035*		-0.018*		-0.003		0.016*
		(0.010)		(0.008)		(0.010)		(0.007)
intermediate supervisory x age		-0.017		-0.001		-0.013		0.004
		(0.009)		(0.008)		(0.009)		(0.007)
other mental work x age		-0.014		0.004		-0.005		0.016*
		(0.008)		(0.006)		(0.008)		(0.006)
un/semi-skilled and supervisory manual x age		-0.042*		-0.009*		-0.022*		0.014*
		(0.005)		(0.005)		(0.005)		(0.004)
Constant	0.907*	0.908*	-4.897*	-4.865*	0.412*	0.406*	-5.917*	-5.927*
	(0.158)	(0.158)	(0.191)	(0.191)	(0.153)	(0.154)	(0.172)	(0.173)
Observations	4,554	4,554	4,554	4,554	4,554	4,554	4,554	4,554
R-squared	0.017	0.025	0.364	0.367	0.004	0.006	0.447	0.448
Number of respondents	1,532	1,532	1,532	1,532	1,532	1,532	1,532	1,532

Standard errors in parentheses, * p<0.05

Table B-3 Fixed Effects regressions of Values on Age (Women 31-55)

Model	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	Openness to Change				Achievement			
Age	-0.010*		0.007*		-0.028*		-0.005*	
	(0.003)		(0.002)		(0.003)		(0.002)	
Mean Rating			0.733*	0.735*			0.987*	0.988*
			(0.017)	(0.017)			(0.018)	(0.018)
higher academic x age		-0.008		-0.006		-0.015		-0.012
		(0.012)		(0.010)		(0.014)		(0.011)
higher supervisory x age		0.011		0.011		-0.026		-0.026
		(0.019)		(0.016)		(0.023)		(0.017)
intermediate academic x age		-0.013*		0.002		-0.026*		-0.006
		(0.005)		(0.004)		(0.005)		(0.004)
intermediate supervisory x age		-0.008		0.014		-0.029*		0.001
		(0.009)		(0.007)		(0.011)		(0.008)
other mental work x age		-0.009*		0.011*		-0.031*		-0.005
		(0.004)		(0.003)		(0.005)		(0.003)
un/semi-skilled and supervisory manual x age		-0.014		0.004		-0.023*		0.002
		(0.007)		(0.006)		(0.009)		(0.007)
Constant	0.547*	0.550*	-4.209*	-4.221*	1.000*	1.001*	-5.402*	-5.417*
	(0.112)	(0.112)	(0.141)	(0.141)	(0.132)	(0.133)	(0.155)	(0.155)
Observations	5,841	5,841	5,841	5,841	5,841	5,841	5,841	5,841
R-squared	0.004	0.005	0.336	0.337	0.021	0.022	0.442	0.442
Number of respondents	1,960	1,960	1,960	1,960	1,960	1,960	1,960	1,960

Standard errors in parentheses, * p<0.05

Table B-4 Fixed Effects regressions of Values on Age (Women 31-55)

Model	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	
		Benevolence				Conservation			
Age	-0.016*		0.002		-0.019*		0.004		
	(0.003)		(0.002)		(0.003)		(0.002)		
Mean Rating			0.784*	0.782*			1.024*	1.024*	
			(0.018)	(0.018)			(0.018)	(0.018)	
higher academic x age		0.015		0.017		0.004		0.007	
		(0.013)		(0.011)		(0.014)		(0.010)	
higher supervisory x age		0.028		0.028		0.009		0.010	
		(0.021)		(0.017)		(0.023)		(0.016)	
intermediate academic x age		-0.016*		-0.000		-0.016*		0.005	
		(0.005)		(0.004)		(0.005)		(0.004)	
intermediate supervisory x age		-0.024*		-0.001		-0.044*		-0.013	
		(0.010)		(0.008)		(0.011)		(0.008)	
other mental work x age		-0.022*		-0.001		-0.020*		0.007*	
		(0.004)		(0.003)		(0.005)		(0.003)	
un/semi skilled and supervisory manual x age		-0.011		0.009		-0.026*		-0.000	
		(0.008)		(0.007)		(0.009)		(0.006)	
Constant	0.918*	0.925*	-4.170*	-4.156*	0.812*	0.828*	-5.834*	-5.820*	
	(0.120)	(0.120)	(0.152)	(0.153)	(0.132)	(0.132)	(0.149)	(0.149)	
Observations	5,841	5,841	5,841	5,841	5,841	5,841	5,841	5,841	
R-squared	0.009	0.013	0.336	0.337	0.011	0.014	0.474	0.475	
Number of respondents	1,960	1,960	1,960	1,960	1,960	1,960	1,960	1,960	

Standard errors in parentheses, * p<0.05,

Table B-5: Effects of values on log odds of graduating from a field of study, population averaged logistic regression

Model	Men								Women							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Conservation	-0.02 (0.12)	-0.10 (0.10)	0.15* (0.09)	-0.05 (0.16)	-0.17 (0.16)	-0.47*** (0.18)	0.01 (0.09)	0.47** (0.19)	-0.07 (0.12)	-0.09 (0.15)	0.10 (0.07)	0.20 (0.22)	0.16* (0.09)	0.11 (0.10)	-0.10 (0.14)	-0.23 (0.38)
Benevolence	0.08 (0.15)	0.19 (0.13)	-0.11 (0.10)	0.02 (0.19)	-0.31* (0.18)	0.11 (0.22)	0.06 (0.10)	0.15 (0.21)	0.04 (0.12)	0.29* (0.17)	-0.08 (0.07)	-0.17 (0.22)	0.08 (0.09)	0.09 (0.10)	0.27* (0.16)	-0.30 (0.38)
Achievement	-0.36***	-0.07	0.10	0.22	0.38**	0.70***	0.13	-0.14	-0.52***	0.15	0.09	0.10	-0.09	-0.09	0.15	-0.63
Openness to Change	0.08 (0.12)	0.00 (0.11)	-0.07 (0.09)	-0.17 (0.17)	-0.12 (0.19)	-0.21 (0.21)	-0.28*** (0.09)	-0.10 (0.18)	0.27* (0.14)	-0.17 (0.19)	-0.02 (0.09)	-0.05 (0.26)	-0.03 (0.10)	-0.12 (0.11)	-0.25 (0.18)	0.18 (0.43)
age	0.13*** (0.03)	0.20*** (0.02)	0.04* (0.02)	0.20*** (0.04)	0.02 (0.04)	0.03 (0.04)	0.11*** (0.02)	0.03 (0.04)	0.09** (0.03)	0.15*** (0.04)	0.09*** (0.02)	0.22*** (0.05)	0.06*** (0.02)	-0.02 (0.03)	0.07* (0.04)	-0.04 (0.11)
Constant	-2.43***	-1.62***	-1.71***	-3.00***	-3.31***	-3.87***	-1.50***	-3.14***	-3.50***	-2.75***	-1.07***	-3.27***	-1.46***	-1.80***	-2.75***	-5.28***
N	1,778	1,778	1,778	1,778	1,778	1,778	1,778	1,778	1,311	1,311	1,311	1,311	1,311	1,311	1,311	1,311
n	991	991	991	991	991	991	991	991	744	744	744	744	744	744	744	744

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Note: models refer to 1. Teacher Training 2. Social and Behavioural Sciences 3. Economics, Management, Business administration and accountancy 4. Law and Public Administration 5. Mathematics, Natural Sciences, IT 6. Applied Technical 7. Medicine 8. Personal Services.

Table B-6 Descriptive Statistics Field of Study Sample

Variable	N	Mean	SD	Min	Max
Conservation	3089	-0.260	0.900	-3.380	1.510
Benevolence	3089	-0.0900	0.860	-3.950	0.960
Achievement	3089	0.250	0.810	-3.050	1.850
Openness to change	3089	-0.0900	0.780	-3.950	0.960
Age	3089	19.59	3.040	16	30
Gender	3089	1.580	0.490	1	2

Table B-7: Descriptive Statistics Current Occupation Sample

Variable	N	Mean	SD	Min	Max
Conservation	8656	-0.08	0.89	-3.38	1.51
Benevolence	8656	-0.01	0.77	-3.87	0.96
Achievement	8656	-0.12	0.84	-3.17	1.85
Openness to change	8656	0.04	0.66	-3.96	0.96
Age	8656	44.33	6.77	32	55
Gender	8656	1.52	0.5	1	2
Marital Status	8656	1.61	0.86	1	3
Married	5550	64.12%			
Decoupled	938	10.84%			
Never Married	2168	25.05%			
Education Level	8656	3.97	1.32	1	6
primary	242	2.8%			
vmbo	1555	17.96%			
havo/vwo	676	7.81%			
mbo	2794	32.28%			
hbo	2503	28.92%			
wo	886	10.24%			
Number of children	8656	0.79	0.68	0	2
0	3106	35.88%			
1-2	4285	49.5%			
3	1265	14.61%			
Employment Relation	8656	1.11%	0.47	1	9
Employee	7823	90.38%			
Self-employed	803	9.28%			
Working for Family Business	12	0.14%			
Missing	18	0.21%			

Table B-8 Descriptive Statistics Intra-Individual Value Change

Variable	N	Mean	SD	Min	Max
Gender	10395	1.56	0.50	1	2
Male	4554	43.81(%)			
Female	5841	56.19(%)			
Birth Year	10395	1967	7.65	1952	1987
Age	10395	44.12	7.07	31	55
Conservation	10395	-0.08	0.89	-3.39	1.52
Benevolence	10395	0.01	0.76	-3.88	0.96
Achievement	10395	-0.14	0.85	-3.17	1.85
Openness to Change	10395	0.04	0.66	-3.97	0.96
Mean Rating	10395	5.44	0.62	3	7

Table B-9: Number of Observations contributed by Respondents, First job Sample

Number of times observed	Number of Observations		Number of Respondents	
	Freq.	Percent	Freq.	Percent
1	920	8.85	920	26.35
2	1442	13.87	721	20.65
3	1779	17.11	593	16.98
4	1824	17.55	456	13.06
5	1920	18.47	384	11.00
6	2496	24.01	416	11.91
7	14	0.13	2	0.06
Total	10395	100.000	3492	100.000

Appendix C Discrete Event History Models for Any Marriage and Cohabitation by Gender

Table C-1: Descriptive Statistics of Marriage Event Sample and Cohabitation Event Sample

Variable	Marriage Sample					Cohabitation Sample				
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
Age	6008	27.6	6.20	18	40	3798	25.6	6.01	18	40
Birth Year	6008	1985	6.98	1968	2000	3798	1987	6.75	1968	2000
Achievement	6008	0.06	0.84	-3.09	1.80	3798	0.11	0.84	-3.09	1.80
Benevolence	6008	-0.13	0.94	-5.66	0.96	3798	-0.15	0.97	-5.61	0.96
Conservation	6008	-0.27	0.91	-3.38	1.48	3798	-0.27	0.91	-3.38	1.48
Openness to Change	6008	-0.12	0.86	-5.79	0.97	3798	-0.14	0.88	-5.69	0.97
Unemployment Rate	6008	4.11	1.38	2.30	6.90	3798	4.12	1.38	2.30	6.90
Male (%)	2630	43.8				1738	45.8			
Female (%)	3378	56.2				2060	54.2			
lower Education (%)	895	14.9				640	16.9			
middle Education (%)	2753	45.8				1978	52.1			
higher Education (%)	2360	39.3				1180	31.1			
Permanent Employed (%)	2841	47.3				1382	36.4			
Non-permanent (%)	583	9.70				350	9.22			
Self-Employed/Employer (%)	221	3.68				112	2.95			
Not Employed (%)	2363	39.3				1954	51.5			
In Education: No (%)	4235	70.5				2176	57.3			
In Education: Yes (%)	1773	29.5				1622	42.7			
Professional/ managerial (%)	592	9.85				294	7.74			
white collar (%)	2479	41.3				1423	37.5			
Manual (%)	1117	18.6				844	22.2			
Missing (occupation) (%)	1820	30.3				1237	32.6			

Table C-2 Discrete Event History Model for Any Marriage and Cohabitation by Gender

	Any Marriage		Cohabitation	
	Men	Women	Men	Women
Age	1.35** (0.15)	1.41** (0.12)	1.63** (0.19)	1.35** (0.10)
Age Squared	0.99** (0.00)	0.99** (0.00)	0.98** (0.00)	0.99** (0.00)
Education (ref. lower)				
middle	0.55† (0.18)	1.52 (0.53)	0.75 (0.30)	1.06 (0.29)
higher	0.69 (0.23)	1.69 (0.59)	1.30 (0.51)	1.29 (0.38)
Employment Status (ref. Employed)				
Non-permanent	1.46 (0.46)	1.14 (0.26)	1.51 (0.50)	0.65 (0.19)
Self-Employed/Employer	0.24† (0.18)	0.81 (0.37)	1.25 (0.53)	Omitted Colinear
Not Employed	0.09* (0.10)	0.80 (0.20)	0.56 (0.27)	0.84 (0.25)
Year of birth	1.00** (0.00)	1.00** (0.00)	1.00** (0.00)	1.00** (0.00)
Occupation (ref: Managerial. Professional)				
white collar	1.10 (0.33)	0.63† (0.15)	0.97 (0.32)	0.86 (0.27)
Manual	0.56 (0.24)	0.57 (0.22)	1.05 (0.42)	0.75 (0.29)
Missing	1.54 (0.50)	0.75 (0.20)	1.19 (0.40)	0.50* (0.18)
Unemployment Rate	1.10 (0.08)	1.06 (0.06)	1.15† (0.08)	1.00 (0.06)
In Education	Omitted Colinear	0.28** (0.14)	1.17 (0.64)	0.85 (0.30)
Conservation	0.94 (0.13)	0.98 (0.10)	1.15 (0.15)	0.97 (0.11)
Benevolence	1.53** (0.24)	1.18 (0.15)	1.09 (0.13)	0.97 (0.14)
Achievement	0.88 (0.11)	0.91 (0.10)	0.92 (0.14)	0.85 (0.10)
Openness to Change	0.68** (0.10)	0.86 (0.11)	0.81 (0.12)	1.19 (0.15)
Observations	1,829	3,378	1,738	2,018
Log Likelihood events	-353.2	-601.5	-322.6	-509.7
AIC	97	164	93	153
BIC	738.4	1237	679.3	1052
	826.5	1341	772.1	1141

Note: S.E. in parentheses, ** p<0.01, * p<0.05, † p<0.1, “in education” dummy in Model 1 and Self-Employed/Employer status in Model 4 are dropped due to multicollinearity, cases perfectly predict outcomes.

Appendix D Descriptive Statistics and Between effects Regression

Table of Values on the Division of Household Labor

Table D-1: Descriptive Statistics

Variable	N	Mean	SD	Min	Max
Age	5534	48.2	10.8	21	65
Year Born	5534	1962	10.8	1943	1993
Gender	5534	1.50	0.50	1	2
Male (%)	2761	49.9			
Female (%)	2773	50.1			
Female Typed Tasks	5534	1.82	0.87	1	5
Male Typed Tasks	5534	3.44	1	1	5
Achievement	5534	4.62	1.03	1	7
Benevolence	5534	6.21	0.76	1	7
Conservation	5534	5.01	1.12	1	7
Openness to Change	5534	6.04	0.72	1	7
Motherhood Norms	5534	0.030	0.94	-2.16	1.55
Norms on Men	5534	3.34	0.78	1	5
Gender Essentialist	5534	-0.040	0.84	-1.06	4.37
Children in the household	5534	1.04	1.08	0	3
Relative Education	5534	0.29	0.45	0	1
Equal or lower (%)	3916	70.8			
Higher (%)	1618	29.2			
Marital Status	5534	1.46	1.28	1	5
Never Married (%)	4898	88.5			
Never been married (%)	636	11.5			
Education	5534	3.62	1.53	0	6
Primary (%)	285	5.15			
Low Sec. (%)	1378	24.9			
High Sec. (%)	497	8.98			
Low Voc. (%)	1561	28.2			
Tertiary Voc (%)	1346	24.3			
University (%)	467	8.44			
Employment Status	5534	1.09	0.76	0	2
Not employed (%)	1382	25.0			
Full-time (%)	2254	40.7			
Part-time (%)	1898	34.3			

Table D-2 Between Effects Model of Respondent's and Partner's Personal Values, Norms and controls on Division of Male and Female Typed Household Labor.

VARIABLES	(1)	(2)	(3)	(4)
	Female Typed Tasks		Male Typed Tasks	
	Women & Partner	Men & Partner	Women & Partner	Men & Partner
Respondent Characteristics				
Income	0.04*** (0.01)	-0.12*** (0.03)	0.02 (0.01)	-0.01 (0.04)
Achievement	0.07** (0.03)	0.02 (0.03)	0.01 (0.03)	-0.08* (0.04)
Benevolence	-0.04 (0.05)	-0.00 (0.05)	0.04 (0.06)	-0.06 (0.06)
Conservation	-0.09*** (0.03)	0.05 (0.03)	0.01 (0.03)	0.06 (0.03)
Openness to Change	0.06 (0.05)	0.05 (0.05)	-0.12* (0.06)	0.04 (0.06)
Motherhood Norms	-0.01 (0.03)	0.02 (0.03)	-0.05 (0.04)	-0.03 (0.04)
Men ought to do more	-0.03 (0.03)	0.13*** (0.03)	-0.02 (0.04)	0.10* (0.04)
Gender Essentialism	-0.03 (0.03)	0.00 (0.03)	0.01 (0.04)	0.04 (0.04)
Partner Characteristics:				
Income	-0.14*** (0.03)	0.06*** (0.01)	0.01 (0.04)	0.02 (0.01)
Achievement	-0.05 (0.03)	0.06* (0.03)	-0.06 (0.03)	0.01 (0.03)
Benevolence	-0.00 (0.04)	0.01 (0.05)	-0.06 (0.06)	0.10 (0.06)
Conservation	0.03 (0.03)	-0.13*** (0.03)	0.06 (0.03)	-0.01 (0.03)
Openness to Change	0.09* (0.04)	0.02 (0.05)	0.00 (0.06)	-0.06 (0.06)
Motherhood Norms	0.04 (0.03)	0.03 (0.03)	0.01 (0.04)	0.01 (0.04)
Men ought to do more	0.15*** (0.03)	0.02 (0.03)	0.07 (0.04)	-0.02 (0.04)
Gender Essentialism	-0.04 (0.03)	-0.02 (0.04)	0.05 (0.04)	0.01 (0.04)
Control Variables Partner				
Education (ref. lower vocational)				
Primary	0.01 (0.12)	0.13 (0.12)	-0.44** (0.15)	0.31* (0.15)

	(1)	(2)	(3)	(4)
VARIABLES	Female Typed Tasks		Male Typed Tasks	
	Women & Partner	Men & Partner	Women & Partner	Men & Partner
Low Sec.	0.02 (0.07)	-0.04 (0.07)	-0.28*** (0.08)	0.09 (0.09)
High Sec.	-0.11 (0.09)	0.13 (0.08)	-0.02 (0.11)	-0.03 (0.10)
Tertiary Voc	-0.06 (0.06)	0.21** (0.07)	0.14 (0.08)	0.18* (0.08)
University	0.00 (0.09)	0.30** (0.11)	0.27* (0.11)	0.25 (0.14)
Employment Status (ref. Full-Time)				
Not Employed	0.38*** (0.07)	-0.14 (0.09)	0.11 (0.09)	0.24* (0.12)
Part-Time	0.28*** (0.07)	-0.25*** (0.07)	-0.07 (0.09)	0.15 (0.09)
Control Variables Respondent				
Marital Status:				
Never been married	0.00 (0.07)	0.16* (0.08)	0.05 (0.09)	0.06 (0.09)
Relative Education	-0.04 (0.07)	-0.03 (0.07)	-0.06 (0.09)	0.21* (0.09)
Education (ref. lower vocational)				
Primary	0.15 (0.11)	-0.00 (0.13)	0.62*** (0.14)	-0.22 (0.15)
Low Sec.	0.01 (0.07)	0.03 (0.07)	0.22** (0.08)	-0.24** (0.09)
High Sec.	0.15 (0.08)	-0.09 (0.09)	0.17 (0.10)	0.12 (0.11)
Tertiary Voc	0.28*** (0.07)	-0.06 (0.06)	0.18* (0.08)	0.10 (0.08)
University	0.25* (0.10)	-0.01 (0.10)	0.24 (0.13)	0.13 (0.12)
Employment Status (ref. Full-Time)				
Not Employed	-0.30** (0.09)	0.28*** (0.08)	0.16 (0.12)	-0.15 (0.09)
Part-Time	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Relative Education	-0.30*** (0.07)	0.13 (0.08)	0.09 (0.09)	-0.15 (0.09)
Children in Household (ref: 0)				
1	-0.02 (0.07)	-0.04 (0.07)	-0.06 (0.08)	-0.02 (0.08)

	(1)	(2)	(3)	(4)
VARIABLES	Female Typed Tasks		Male Typed Tasks	
	Women & Partner	Men & Partner	Women & Partner	Men & Partner
2	-0.10 (0.06)	-0.04 (0.06)	-0.11 (0.07)	-0.00 (0.07)
3 or more	-0.14 (0.08)	-0.17* (0.08)	0.01 (0.09)	0.03 (0.10)
Age	-0.01 (0.01)	-0.00 (0.01)	0.01 (0.02)	0.01 (0.02)
Birth Year	-0.00 (0.01)	0.00 (0.01)	0.01 (0.02)	0.00 (0.02)
Constant	4.82 (27.58)	-3.48 (28.44)	-9.90 (34.72)	-4.41 (34.86)
Observations	2,773	2,761	2,773	2,761
R-squared	0.23	0.22	0.09	0.08
Number of Respondents	1,247	1,239	1,247	1,239
Min T	1	1	1	1
Avg T	2.224	2.228	2.224	2.228
Max T	4	4	4	4

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05