European University Institute
Department of Political and Social Sciences

Digital Inequalities as Class Inequalities? A Comparison of Youth in Advanced Societies In- and Outside Europe

Tomasz Piotr Drabowicz

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

Florence, July 2012

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Examining Board:

Prof. Jaap Dronkers (formerly EUI/Univ. Maastricht) (Supervisor)
Prof. Fabrizio Bernardi (EUI)
Prof. Monique Volman (Univ. Amsterdam)
Prof. Kim Weeden (Cornell University)

Moim ukochanym Rodzicom
To Anna and Józef, my beloved parents

Digital Inequalities As Class Inequalities?
A Comparison Of Youth In Advanced Societies In And Outside Europe.

ABSTRACT

This dissertation merges two streams of research hitherto rarely mixed together: class analysis and digital inequality studies. It also focuses on the comparative research of adolescents from advanced societies – a social category relatively underrepresented in studies on digital inequality, partly because of 'the myth of the cyberkid' (Facer and Furlong 2001) that is prevalent in the field and that suggests the young people are naturally competent users of the Information and Communication Technologies (ICTs). Additionally, this dissertation deals with the influence of gender on the patterns of inequality in access to the ICTs among adolescents. The dissertation's empirical basis is that of information on the ICTs possession, skills, and usage collected for 39 countries participating in the 2006 wave of the Programme for International Student Assessment (PISA) of fifteen year-olds (OECD 2006a, 2006b, 2009a, 2009b).

The results of the analysis reported in chapter three of this dissertation allow concluding that the 'old' social class inequalities in the parents' generation are not being reproduced with respect to the 'new' digital inequalities in the children's generation. Among adolescents in 39 countries under investigation (Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Jordan, South Korea, Latvia, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, the Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, and Uruguay), social class does not differentiate access to the new forms of cultural capital associated with possession, skills, and usage of ICTs. The differences between service class and working class children (the particular focus of the study undertaken in chapter three of this thesis) are not substantial as far as skills and usage access are concerned, and they depend on the availability of the technology among the general population as far as physical access is concerned. Thus, one may expect that as the Internet penetration rate among the general population increases in the countries in which in 2006 service class adolescents enjoyed substantially higher probability of having the Internet access at home, so the advantage of service class adolescents in these societies will decrease to unsubstantial levels already characteristic of technologically more advanced countries.

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Chapter four of this dissertation investigates how gender exerts its influence on contemporary adolescents with respect to their access to the ICTs. The chapter's focus is on the so-called usage access. Ordinal regression modeling is used as a method for data investigation. The analysis points to the persistence of gender inequality seemingly in favour of boys. In all countries under investigation, boys report using computers and the Internet for educational purposes more often than girls. Controlling for the 2006 value of the national GDP per capita, the level of a country's gender inequality measured by the Gender Gap Index does not have any statistically significant effect on gender gap in educational use of ICTs. A sign of the gender coefficient suggest, however, that the increase in society's gender-equality is associated with the increase in boys' advantage over girls as regards the frequency of ICT/Internet educational use. The possibility that this advantage of boys is in fact a sign of their educational underperformance is discussed. Another possibility is also discussed, namely, that girls' decreased (in comparison with boys) frequency of using computers and the Internet for playing computer games might, counterintuitively, be the source of girls' disadvantage in the future.

Chapter five of this dissertation investigates whether one's having the Internet access at home, one's gender, and social class membership of one's father differentiate the frequency of fifteen-year olds' advanced computer use. Multiple Correspondence Analysis, one of the specific methods of Geometric Data Analysis, is used as a method for data investigation. The analysis reveals that the father's social class – operationalized according to the Erikson-Goldthorpe seven-class scheme – does not differentiate adolescents' frequency of computer use. Neither gender nor having the Internet access at home turns out to be a source of substantial inequality in adolescents' computer use, too.

In terms of policy recommendations the conclusions prescribed by the analysis presented in this dissertation are as follows. Given the lack of any substantive digital inequality of any kind among adolescents in the countries under investigation neither the public authorities of any level (local/regional/national/supranational) nor the NGOs need to allot money for initiatives aimed at combating digital exclusion among this age category.

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Acknowledgments

Success has many fathers, while failure is an orphan – as Napoleon putatively has said. The current dissertation is no exemption from this rule, although in this particular case the success has not only many fathers, but many mothers as well.

This dissertation would not have been written without Jaap Dronkers. I was extremely lucky to have him as my supervisor, as he is a rare example of a man who is simultaneously: an expert of renown in his field, a good teacher able to effectively communicate his vast knowledge and expertise, and a good, caring, and patient man (and in case of supervising me he truly needed a lot of patience). The dry English word 'supervisor' does not precisely convey his role in my life for the last five years: from my point of view, the German word *der Doktorvater* is semantically more accurate, since I consider Prof. Dronkers my professional father. If I am a sociologist, I am because of him.

My work, however, has benefited enormously also from the advice given me by the members of my examining board: Fabrizio Bernardi (whose seminars and the Inequality Working Group I also had a pleasure, and a privilege, to attend), Monique Volman, and Kim Weeden. Their criticism has substantially improved the quality of my thesis. Even if I did not follow all their suggestions in the present version of my dissertation, I am going to take advantage of their insightful and detailed comments once preparing journal publications based on the work hereby submitted. Shortly speaking: I want to thank you for your time and for your professional dedication to making this dissertation better.

One of the privileges of attending the EUI comes from the fact that one is able to interact with excellent professors other than one's own supervisor. Mark Franklin, who commented on the earlier drafts of one of the empirical chapters of this dissertation and who introduced me to the proper study of quantitative methods, will always have a special place in my heart. I am grateful I could have known him. Martin Kohli, who read my so-called June paper and provided me with detailed comments, is another EUI professor for whom I want to express my deep gratitude.

From outside of Florence, Alek Kucel – a dear friend of mine who told me about and encouraged me to apply to the EUI, for which I am indebted to him for life – and Jonathan Smith, whom I had a chance to meet at the RC28 conference in Iowa in August 2011, read parts of the manuscript and provided me with useful and thought-provoking comments.

Needless to say, only I am fully responsible for all the remaining mistakes and weaknesses of the present text.

At the EUI, I have also extremely benefited from following two courses given by Andrea Ichino: one on causality and the other on limited dependent variables. Sven Steinmo's seminar on evolutionary theory in social and political sciences was a lovely intellectual distraction and an exquisite 'food-for-thought' from which I hope to benefit in future.

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Since I have touched the topic of English, my special thanks go to Nicki Hargreaves and Nicky Owtram, who corrected parts of my manuscript and who organized academic English writers' group, where I and some of my colleagues could discuss at length how better to communicate our ideas in English. If this language is after four years in the EUI less foreign to me than it was when I first entered Badia Fiesolana, it is primarily thanks to the work of both Nicolas.

Science is a collective endeavour, but very often the work of librarians is not considered an essential part of this endeavour. This is a huge injustice: without a properly working library that has a dedicated and professional staff, no one can write anything of scientific value. Rumour has it that the EUI's Library is the best on the Continent when it comes to social and political science collections. I agree with this rumour wholeheartedly and I want to express my gratitude to the entire Library's staff, but personally to Thomas Bourke, Ruth Gbikpi, and Peter Kennealy.

Throughout five years Marie-Ange Cattotti, Paivi Kontinen, Maureen Lechleitner, Monika Rzemieniecka, and Gabriella Unger took care of all the administrative work surrounding either my thesis or my participation in workshops, conferences, and summer schools. In Villa La Fonte, Susan Garvin wonderfully organized conferences and lectures that broadened my intellectual horizons. My special thanks go to Maureen Lechleitner, who skilfully navigated me through the waters of thesis defence.

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Ken Hulley and Francoise Thauvin did a terrific job at the Academic Service and helped me more than one time when I had personal difficulties. Judith Przyrowski from the Career Development Unit saw to it that the EUI offered me and other doctoral students additional courses and trainings strengthening our competencies and making us more competitive on the oftentimes difficult academic job market. My gratitude goes to all three of them.

The EUI is, however, first and foremost a formative – and hence a generational – experience. In other words, the EUI is primarily other researchers: people with whom you can discuss your work and with whom you share your everyday problems. Shortly speaking, the EUI is your friends. I want to thank very much Edoardo Bersanelli, Jørgen Bølstadt, Roni Dorot, Martyn Egan, Georges Fahmi, Tomasz Gabor, Kasia and Kajtek (and their little son Ignacy) Gracz, Alexi Gugushvili, Chris Hanretty, Jenny Hanson, Mads Jensen, Christel Koop, Natalia Krasicka, Juana Lamote, Kathryn Lum, Therese Lützelberger, Magdalena Muszel, Nicola Pensiero, Yvette Peters, Grzegorz Piotrowski, Daria Popova, Filipa Raimundo, Marit Rebane, Axelle Reiter, Maja Rynko, Furio Stamati, Maarit Ströbele, Michael Tatham, Carolien Van Ham, Kristjan Vassil, Till Weber, Tomasz Woźniak, Wu Po-Kuan, and Agnieszka Wysokińska. Dear friends: knowing you is a great privilege, for which my gratitude towards the EUI is eternal.

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Finally, let me turn to the two most beloved people in my life: my parents. They have supported me psychologically, emotionally, morally, and – last but not least – financially, throughout five years of my Ph.D. studies. I cannot express my love and gratitude for everything they are and everything they have done for me in any language I can speak. They are the best parents, they are truly the ideal parents – and I am really lucky to be their son. Thank you for everything, Dad and Mum, this work is dedicated to both of you.

Florence, 26th May 2012

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1. INTRODUCTION

The great American evolutionist, David S. Wilson, while discussing many advantages of science writes among other things about 'the pleasure of being certain about something small, if humble, rather than uncertain about something large, if grand' (Wilson 2008: 296). As you are going to learn from the following pages, the contribution of this dissertation to the discipline of sociology consists exactly in providing in a sure manner a piece of knowledge about a humbly small fragment of social reality. To put it conversely, do not expect that this dissertation will entertain you by engaging and indulging in a series of discussions that – although unmistakably interesting, broad in scope and touching on grand subjects – would end up with uncertain conclusions.

The truth claims of this dissertation are modest and clearly delineated, and the policy recommendations derived from the analysis presented in the following pages are limited. The narrowness of the present study is compensated, however, by the thoroughness of investigation. Namely, the problem at hand is investigated using four different statistical techniques (Logistic Regression, Ordinary Least Squares Regression, Ordinal Regression, and specific Multiple Correspondence Analysis). The conclusions of the analysis reported below are strengthened and corroborated by the fact that these various techniques give similar answers to the research questions asked in this dissertation. Furthermore, the two-stage regression design used in chapters three and four allows for taking into account diversity of national contexts in the study undertaken.

The initial impulse for conducting the research reported in this dissertation came from the scepticism towards the 'rosy' view of such cyber-optimist authors as, for example, Tapscott (1998), who were making their plans for the bright future promised by the development and dissemination of Information and Communication Technologies (hereinafter ICTs). The scepticism applied particularly to cyber-optimists' claim that, at least in developed societies, all children and adolescents are equally well prepared to take advantage of various benefits offered by new technological developments. Being aware of the persistence of inequality of chances among children and adolescents living in the developed world with respect to many different, as it were, non-digital aspects of life (cf. Shavit and Blossfeld 1993; Lareau 2003), and simultaneously subscribing to a view succinctly expressed by Peter and Valkenburg (2006: 302) that: 'Adolescents' internet use thus does not transcend the boundaries of social inequality,' it seemed to me worthwhile at that time to investigate the

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inequality in broadly understood access to ICTs among adolescents, using quantitative methods and cross-country data. Following Castells (2000; 2001a; 2001c; 2001d) and van Dijk (2005; 2006), I assumed that having the Internet access at home, being able to use computers and the Internet proficiently, and actually using them for advancing whatever one's own goals in life are – are new and increasingly important elements of what Bourdieu (1986) called 'cultural capital.' My basic intuition was that – contrary to the cyber-optimists – this new piece of cultural capital is not distributed evenly even among young people living in developed societies and that the unequal patterns of its distribution in the children's generation reflect the old socio-economic inequalities in the parents' generation.

For the purpose of this thesis, 'the old socio-economic inequalities in the parents; generation' are operationalized as the Erikson-Goldthorpe seven-class scheme. The reason for the choice of this particular scheme as the main theoretical framework for the analysis that follows was the fact that this class scheme has become standard in comparative inequality research.

Besides social class, gender is another stratifying factor being studied here. The literature review on gender patterns of ICTs appropriation among young people living in developed societies led me to expect gender equality with regard to broadly understood access to computers and the Internet among the age category under investigation.

If I were to summarize the contribution of my dissertation to the ongoing sociological conversation succinctly, I would put it in the following way. It shows that, contrary to my initial working hypothesis, the 'old' social inequalities of parents' generation in terms of Erikson-Goldthorpe social class do not reproduce into 'new' inequalities in the broadly understood access to computers and the Internet in children's generation. With respect to gender, again contrary to the initial working hypothesis, the analysis reveals a lack of balance predicted by the earlier research on gender patterns of ICTs appropriation among young people. It also poses questions for further investigation with regard to the meaning of the increased use of computers and the Internet for both education and entertainment purposes among adolescents.

A word on the data used for the analysis. It is entirely based on the PISA 2006 survey organized by the Organization for Economic Co-operation and Development (OECD) under the project title 'The OECD Programme for International Student Assessment' (hereinafter PISA). This research aims to provide internationally comparable evidence on the performance of fifteen-year old students in all the OECD and some selected partner countries. The 2006 wave of the PISA study also includes ICTs Familiarity Questionnaire containing

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batteries of questions dealing with and corresponding to physical, skills, and usage digital inequality (van Dijk 2005: 20). Unfortunately, the PISA 2006 dataset does not contain questions relating to psychological aspects of access to computers and the Internet, so this aspect of digital inequality has to be entirely dropped from analysis. Data-files used for the empirical analysis reported in the following pages are exactly the same as the ones that the OECD has made available on the Internet for the purpose of secondary analysis. The content and structure of the data are summarized on the OECD's website[1] in the following way:

> From this page you can download the PISA 2006 dataset with the full set of responses from individual students, school principals and parents. These files will be of use to statisticians and professional researchers who would like to undertake their own analysis of the PISA 2006 data. The files available on this page include questionnaires, data files in ASCII format, codebooks, compendia and SAS and SPSS control files in order to process the data.

Details on the data, tests, questionnaires and sampling procedures can be found in the general and technical reports (OECD 2001; 2002; 2005a; 2005b; 2006a; 2006b; 2009a; 2009b). The main advantage of using the PISA dataset is that it allows for cross-national comparability. It contains detailed information about parents' occupation as well. This information is coded according to the International Standard Classification of Occupation (ISCO-88), as provided by the International Labour Office. ISCO-88 is a four-digit hierarchical coding schema comprising 390 different occupational categories. Since the Erikson-Goldthorpe class scheme is occupation-based, information provided by the PISA data allows one to present students' socio-economic background using these schemes. Because the PISA data contain information about both mother's and father's educational and occupational status, when it is necessary, one is able – following Korupp et al.'s (2002) suggestion – to use their Modified Dominance Model in one's analysis. Moreover, the PISA data allow for using information about respondent's immigration status and place of residence (urban/ rural) to be taken into account as the control variables.

The main disadvantage of the PISA programme is the cross-sectional nature of the collected data. Although it is recommended to choose a longitudinal perspective when studying phenomena connected with digital inequality (van Dijk 2002; Peter and Valkenburg

[1] PISA's homepage is available at http://www.pisa.oecd.org.

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2006), the unavailability of appropriate longitudinal data as well as the nature of the problems dealt with in this dissertation force me to adopt the cross-sectional design for my study.

With regard to the structure of this dissertation, chapter two contains the theoretical background, i.e., discussion of the use of the notion of social class in sociology, starting with Marx's introduction of the term in the then emerging field of study of society. It also covers recent contributions to the sociological debate dealing with the changing position of women in contemporary societies and consequences of such changes for the study of social stratification in general, and the subject of this dissertation in particular. It subsequently introduces the notion of digital inequality in its four aspects: psychological, physical, skills, and usage (van Dijk 2005: 20). Chapter three deals with the inequality in physical, skills, and usage access to computers and the Internet among fifteen-year olds and the relationship of these three different kinds of digital inequality to adolescents' social background, measured as their parents' Erikson-Goldthorpe social class membership.

Chapter four presents results of the analysis on the relationship between gender and usage access.

Chapter five revisits the problems covered in chapter three, although focusing on paternal social class membership only, using a different statistical method – Multiple Correspondence Analysis. Chapter eight summarizes the main results, asks some questions for further research, and contains policy recommendations.

The figures mentioned in the text are inserted inside chapters, except for chapter five in which the figures mentioned in the main body of text are placed behind the chapter. The tables discussed in each chapter are placed immediately behind a given chapter, with the exception of Table 5.1 that is placed inside chapter five. Three annexes containing mainly technical details, the first of these appendixes dealing with the analysis of missing values, are placed behind conclusions in chapter six. Another two appendixes containing information on how the original ISCO-88 codes with fathers' and mothers' occupational categories are transformed into the occupational dummy variables used in the analysis are given only in an electronic format on CD attached to the printed dissertation, because they are not necessary for following the line of this dissertation's argument and because they would look awkwardly on paper.

Vien retro a me, e lascia dir i dati.

2. THEORETICAL BACKGROUND

This chapter is the theoretical part of my dissertation. It explains the significance of youth-centered comparative research on digital inequality for the study of social inequality in contemporary advanced societies. The proposed research project stands at the intersection of two different – hitherto rarely combined in quantitative, comparative studies – streams of research: class analysis and digital inequality studies – with an additional special focus on youth: the age group that, in the context of developed societies at least, was until recently considered to be the least likely among those possibly affected by the broadly understood inequality in access to ICTs. As Livingstone (2006) puts it, it was a so-called 'myth of the 'cyberkid'' (Facer and Furlong 2001). In other words, very often a conscious or unconscious assumption was made that young people – regardless of their social background and the material, social, and cultural resources available to them – are 'natural born' computer and Internet experts.

The chapter is organized as follows: it begins with the description of two classical sociological conceptualizations of the notion of social class in the first section; it then proceeds with the discussion on the usefulness or lack thereof in the application of that concept for the study of social inequality in contemporary advanced societies (section two); it continues to deal with that question in section three, where it introduces a recently proposed new approach to class analysis (a so-called micro-class approach). Because of the changing pattern of gender roles in contemporary societies, a separate section four is devoted to the discussion about the role of women in the intergenerational transmission of social position in the present-day advanced societies. Then section five introduces the concept of digital inequality; and the following section six discusses its importance for the study of contemporary social inequality. Finally, section seven gives reasons for focusing digital inequality research on adolescents. The summary at the end of the chapter states its main conclusions.

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2.1. The classical conceptualizations of social class in sociology

In recent sociological debates the whole concept of 'social class' has been challenged by some as a notion belonging to the XIXth century and therefore inapt for the analysis of social reality in the early XXIst century (Krzywdzinski 2005: 62). Before discussing some of these critiques, this section presents a resume of the classical sociological conceptualizations of the notion of 'social class'.

The first chronological classical conceptualization of class is, of course, that of Karl Marx. Although he has never systematically exposed his theory of class (he intended to do so in the last – unfinished – chapter of the third volume of his *Capital*), one can nevertheless reconstruct it from the generalizations he occasionally made throughout his works and from its application to problems he was analyzing. The following resume is based on Ralf Dahrendorf's (1959: 3-35) reconstruction and interpretation. Following a distinction made by this author between 'Marx the philosopher'[2] (whose claims cannot be empirically falsified) and 'Marx the sociologist' (whose categories, hypotheses, and theories can be put to an empirical test) I will focus only on those elements of Marx's model that can be – so to speak – attributed to the latter.

Marx was not interested in the static accounts of social structure, his theory of class was a theory of structural change brought about by revolutions based on conflicts between antagonistic interest groups. As Dahrendorf (1959: 19) puts it:

> *[F]or Marx the theory of class was not* a theory of a cross section of society arrested in time, in particular not *a theory of social stratification, but a tool for the explanation of changes in total societies*. In elaborating and applying his theory of class, Marx was not guided by the question 'How does a given society in fact look at a given point of time?' but by the question 'How does the structure of a society change?' (italics added – T.D.)

Although – especially in his more empirically-leaning and less theoretically-focused works (e.g. Marx: 1852/1965) – Marx acknowledged the existence of the plurality of classes in the society of his time; the main point about his model was nevertheless a prediction that in the course of capitalism's further development, social structure will eventually be reduced to

[2] For a good and detailed (although sometimes biased because of author's previous ideological engagements) overview and a critical discussion of that aspect of Marx's intellectual legacy, see Kołakowski (1978). For equally good, but less partisan approaches, see Avineri (1968), Berlin (2002), and Walicki (1995). For a superb and concise introduction to Marx's *opus magnum*, see Wheen (2006).

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two prevalent classes only: on the one hand, the dominant bourgeoisie or capital, and on the other hand, the dominated proletariat or wage labor. The latter's struggle was to bring about a revolutionary change and the coming of a classless, egalitarian society as the result of workers' victory in the class conflict.

For Marx, the above-mentioned class division and class conflict were rooted in the division of property in the production.

> Property, however, must not be understood in terms of purely passive wealth, but as an effective force of production, as 'ownership of means of production' and its denial to others. In this sense, the 'relations of production,' i.e., the authority relations resulting from the distribution of effective property in the realm of (industrial) production, constitute the ultimate determinant of the formation of classes and the development of class conflicts (Dahrendorf 1959: 20).

The unequal distribution of property in production, in turn, determines the distribution of political power in society and shapes the ideas that mold the character of a given period ('the ruling ideas of a period'). Summing up: the economic substructure (*die Basis*) ultimately determines the political, ideological, and cultural superstructure (*der Überbau*).

According to Marx, however, relations of production constitute only a basis of a society; they are a necessary, but not sufficient condition of classes' full formation. A mere gap between life situations of capitalists and proletarians does not lead to a social conflict. The economic processes (through the mechanism of exploitation of wage labor, built inherently into the capitalistic system, leading to the polarization of class structure; the pauperization of the proletariat; and the concentration of the private property of the means of production into the hands of constantly shrinking in size – but not in its importance – bourgeoisie) can on their own lead only to the formation of 'classes in themselves' (*Klassen an sich*). 'Marx's theory of class formation *starts* with the postulate of a common class situation, the main components of which are a common relation to effective private property, a common socio-economic situation, and a common tendency of actual behavior determined by ''objective'' interests' (italics added – T. D.) (Dahrendorf 1959: 24). However, though common economic interest unites classes, the full formation of the latter is unfinished until groups sharing similar socio-economic situations organize themselves politically; thus transforming themselves profoundly during the process and becoming 'classes for themselves' (*Klassen für sich*). In Dahrendorf's words, for Marx:

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> Classes do not constitute themselves as such until they participate in political conflicts as organized groups. Although Marx occasionally uses the concept of class in a less determinate, more comprehensive sense, a multitude of statements leave little doubt that for him class formation and class conflict were phenomena belonging to the sphere of politics. (…) [T]he carriers of class conflict have organized themselves as classes, and have become classes, only if class conflict has assumed a political character. For Marx, this last stage of class formation has two complementary aspects. On the factual level of social structure it involves the association of people who share a class situation in a strict group, party, or political organization. (…) On the normative and ideological level of social structure it involves the articulation of 'class-consciousness,' i.e., the transformation of 'objective' class interests into subjectively conscious, formulated goals of organized action. The complete class is characterized not by a common though unconscious direction of behavior, but by its conscious action toward formulated goals (Dahrendorf 1959: 25).

To a great extent in opposition to Marx's theory of class, the second classical conceptualization of the social class in sociology was developed at the beginning of the XXth century by another German scholar, Max Weber. Whereas for Marx the key notion in the analysis of the society was 'property' and its relations, Weber's key analytical concept in the study of society was 'power'. He defined this as: 'the chance of a man or a number of men to realize their own will in a communal action even against the resistance of others who are participating in the action' (Weber 1921/2001a: 132). Unlike Marx, Weber does not consider economics as the realm unidirectionally determining other aspects of human social life. His model of society is three-dimensional: within any given society, individual or group power can be distributed along three dimensions: economic, social, and political. Although interrelated (in the sense of mutually and reciprocally influencing each other), each of these axes is autonomic (e.g. one's social status may be independent of her economic position or political influence). Also unlike Marx, Weber does not regard the element of a conscious, communal action as pertaining to the definition of social class. In his terminology:

> Classes are not communities; they merely represent possible, and frequent, bases for communal action. We may speak of a 'class' when (1) a number of people have in common a specific causal component of their life chances, in so far as (2) this component is represented exclusively by economic interests in the possession of

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> goods and opportunities for income, and (3) is represented under the conditions of the commodity or labor markets (Weber 1921/2001a: 132-133).

In other words, Weber limits the use of the notion of class to the economic realm only; he refers the term 'class' to any group of people that is found in the same class situation, that is in:

> the typical chance for a supply of goods, external living conditions, and personal life experiences, in so far as this chance is determined by the amount and kind of power, or lack of such, to dispose of goods or skills for the sake of income in a given economic order (Weber 1921/2001a: 133).

Thus, the class situation is ultimately a market situation which might, or might not, become the basis of either spontaneous or planned group action.[3]

In Weber's terminology the 'social class' structure of a given society denotes the plurality of all class situations between which an interchange of individuals on a personal basis or in the course of generations is readily possible and typically observable. His model provides for a plurality of types of classes. Weber himself distinguishes between: (1) 'property classes' (*Besitzklassen*) – when a class situation for their members is primarily determined by the differentiation of property holdings; and (2) 'acquisition classes' (*Bewerbsklassen*) – when the class situation of their members is primarily determined by their opportunity for the exploitation of services on the market.

Members of the property classes might be either negatively or positively privileged (the latter typically live from property income and are capable of monopolizing the privileges of socially advantageous kinds of education – so far as these involve expenditures). Similarly, the acquisition classes might be divided into those privileged negatively (e.g. skilled, semi-skilled or unskilled workers of the various principal types) or positively (e.g. entrepreneurs; members of the 'liberal' professions with a privileged position by virtue of their abilities or training; or workers with special skills commanding a monopolistic position – regardless of

[3] Weber emphasized that: 'The concepts of class and class situation as such designate only the fact of identity or similarity in the typical situation in which a given individual and many others find their interests defined. In principle control over different combinations of consumer goods, means of production investments, capital funds or marketable abilities constitute class situations which are different with each variation and combination. Only persons who are completely unskilled, without property and dependent on employment without regular occupation, are in a strictly identical class situation. Transitions from one class situation to another vary greatly in fluidity and in the ease with which an individual can enter the class. Hence the unity of 'social' classes is highly relative and variable' (Weber 1921/2001b: 142).

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how far these skills are hereditary or the result of training). Positively privileged acquisition classes usually seek to monopolize the management of productive enterprises in favor of themselves and their business interests; or they tend to secure their economic position through exercising influence on the economic policy of political bodies and other groups.

Because of its greater theoretical flexibility (i.e. the fact that it allowed for distinguishing a multiplicity of classes and class situations), its lesser *désintéressement* in the problems of social statics (i.e. in the actual shape of a given social structure at a given point in time), and its simultaneous acknowledgement of the possibility of intra- or intergenerational mobility between classes – the Weberian approach inspired an alternative (to post-Marxian) perspective in the study of social inequality and eventually has become the basis of different theories of social stratification.[4]

This dissertation uses as its social class theoretical framework class schemes developed by a British sociologist John Goldthorpe (see, especially Erikson and Goldthorpe (1992), but also Breen and Goldthorpe (2001), Goldthorpe and Marshall (1992), and Goldthorpe (1980, 2000)). Although he vehemently denies being a Weberian class analyst, his approach to the study of social mobility and social stratification is nonetheless under heavy Weberian influence. The choice of Goldthorpe's (or, to be more precise, Erikson-Goldthorpe's) class scheme as the theoretical framework of the analysis undertaken in this dissertation is caused primarily by the fact that this approach has become standard in comparative inequality research.

The overview of the history of the notion of social class in sociology would not be complete, however, without mentioning the notion's critique and recent attempts at redefining it. The following two sections of the current chapter deal with these issues consecutively.

2.2. The 'death of class' hypothesis

After Marx and Weber, social class has been the main subject of interests and the central analytical category organizing much of the sociological reflection and research on society, its stratification, and its inequalities. In the academic division of labor that emerged

[4] Among the most prominent representatives of the post-Weberian tradition one can name – among others – Giddens (1973), Parkin (1979), Marshall et al. (1988), Murphy (1988), and Breen (1997). For an interesting attempt of conducting the post-Weberian analysis of the recent changes in the US class structure, see Florida (2002, 2005).

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in the 1890s and solidified itself in the course of the following century, sociology became a discipline devoted primarily to the study of social divisions *qua* class divisions. However, because of the transformation of the social structure in capitalist countries following their 1970s economic crisis, and because of the historical demise of state-socialist systems a decade later, the usefulness of 'social class' as an analytical category has begun to be challenged within the discipline.[5] This section presents four leading positions that question the applicability of any class scheme for the proper and adequate study of inequality in the contemporary societies. These four leading positions: Nisbet's decline and fall of social class argument, Beck's individualization in the second modernity thesis, Pakulski and Waters's death of class thesis, and Kingston's account of a classless, yet still hierarchical society, are reviewed below in a chronological order.

The 'very first' beginning of the discussion on the death of social class, or at least the declining importance thereof, can be found in the 1890s. It was then when Eduard Bernstein, at the time one of the leading social-democratic figures of the II International, came up with his explanation of why Marx's prediction about the gradual impoverishment of the working class, its growing political radicalization, and the overall transformation of the Western European industrial societies into a two-class (bourgeoisie-proletariat), antagonistic scheme that would eventually produce the worker's revolution – had not so far happened (Bernstein 1899). Thus, the first attempt to critically revise Marx's class scheme was not so much the denial of class existence (as the 'death of class' thesis would subsequently insist), but rather the first (among subsequently abundant) revision and readjustment of the original Marxian scheme made within the Marxist tradition as the consequence of changes in the socio-economic reality.[6]

[5] For a collection of texts arguing for and against usefulness of class analysis in the study of inequalities in contemporary advanced societies (with a particular focus on the case of the United Kingdom), see Lee and Turner (1996).

[6] Neo-Marxist sociology – or at least a sociology heavily influenced by Marx's thought, concepts, and notions – is a major part of the XXth century history of the discipline. As writing such a history is well beyond the scope of this chapter, the aim of this note is to suggest to the Reader a number of important works written in and contributing to the sociological neo- (or post-) Marxist tradition. These include Dahrendorf (1959) on the study of social conflicts in the developed industrial societies as class conflicts; Braverman (1974) on the impact of technological progress on class relationships and power structure within the capitalistic enterprise and – as a consequence of it – in the society at large; Poulantzas (1974, 1978) on changes in the class structure of contemporary capitalistic societies and on the role of the state in the reproduction and modification of existing class relations; Bowles and Gintis (1976) on reciprocal links between class structure and school system in the United States; Bernstein (1971) on the linguistic and cognitive differences between children raised in higher and lower classes; Wesołowski (1964/1978) on social classes, social strata, and political power under state-socialism; and Wallerstein (1974, 1979, 1980, 1989) who analyses the consequences of the development of the modern capitalism from a global perspective. As regards the neo-Marxist analysis of stability and change in contemporary social structures, one should refer to numerous works by Wright (e.g. 1978, 1979, 1980a, 1980b, 1985, 1996, 1997, 2000, Burawoy and Wright 2001).

However, it was not until Nisbet's paper of 1959 (Nisbet 1959) that the idea of the irrelevance of social class for the study of advanced capitalistic industrial societies was first formulated in its contemporary form. Nisbet wrote that

> The term social class is by now useful in historical sociology, in comparative or folk sociology, but that it is nearly valueless for the clarification of the data of wealth, power, and social status in contemporary United States and much of Western society in general (…) class, where it exists, is a tangible relationship; it is substantive, functional, and recognizable through ordinary processes of observation. The proof of existence of a social class worthy of the sociological name should not have to depend upon multivariate analysis, with correlations generally reaching no higher than .5 (Nisbet 1959: 11). [7]

In Nisbet's view, it was the very same capitalism and its development – which according to Marx (1867/1976) himself were supposed to bring about an inevitable struggle between only two, distinctly separated social classes of adversarial, irreconcilable interests – that were the driving forces behind the process of class decomposition: 'The very forces which dissolved the class lines of pre-industrial society acted, in the long run, to prevent any new classes from becoming fixed.' However, not only purely economic forces contributed to the gradual dissolution of the 'class problem': 'National democracy, economic and social pluralism, ethical individualism, and an ever-widening educational front joined to create new patterns of social power and status and to make class obsolete in constantly widening sectors of Western society' (Nisbet 1959: 14). As a result, class divisions were being gradually replaced by 'multidimensional, fluid and continuous status inequalities' (Pakulski and Waters 1996: 17).

Nisbet made his claim on the basis of socio-economic, political, and cultural transformations that were taking place in the 1940s and 1950s in the United States of America.[8]

Although Bourdieu's approach to class analysis is considered as a fully distinct and separate one and thus following neither Marxian nor Weberian path in the study of society (cf. Weininger 2005), it nevertheless has been heavily influenced by (post-) Marxian ideas. For Bourdieu's stance on class and the reproduction of class relations, see (Bourdieu 1984, 1986, 1987, 1990: 122-139, 1991: 229-257, 1998: 1-18; Bourdieu and Passeron 1990; Bourdieu et al. 1999). For a general introduction to Bourdieu's work, see Bourdieu and Wacquant (1992).

[7] As Pakulski and Waters (1996: 18) put it: 'Presumably Nisbet could be even more firm in his view under current circumstances in which the correlations are seldom as high as 0.2.'

[8] Similar conclusions about the waning of hitherto sharp political, ideological, and social divisions in the American society of that time were also reached more or less simultaneously by Bell (1960).

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Three decades later the German sociologist Ulrich Beck reached similar conclusions. In 1986, relating mainly to the post-II Word War West German experience, he claimed that

> we are eye witnesses to a social transformation within modernity, in the course of which people will be *set free* from the social forms of industrial society – class, stratification, family, gender status of men and women – just as during the course of Reformation people were 'released' from the secular rule of the Church into society (original italics) (Beck 1986/1992: 87).

He argued that the transformation from the first to the second modernity was signaled, among other things, by the 'social surge of individualization' i.e. by the increasing variation and differentiation of lifestyles and forms of life.[9]

Similarly to Nisbet, Beck thought that the individualization was set in motion by the development of the labor market[10] (especially the massive entrance of women into the labor force) and the institutions of the welfare state, by the process of educational expansion,[11] by the overall rise of incomes, and by the improved standards of living. Technological innovations also contributed to the processes of individualization, 'in particular in regard to a greater flexibility in labor market relations and in regard to regulations governing working hours' (Beck 1986/1992: 99). However, the dissolution of the industrial social classes and the increasing individualization does not lead to the waning of social inequalities. On the contrary, '*processes of individualization can be quite precarious*, especially where groups suddenly face or are threatened by unemployment and forced to confront radical disruptions of their lifestyle precisely because of the individualization they have experienced, and despite

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[9] Beck referred to the individualization as 'the demand for control of one's own money, time, living space, and body. In other words, people demand the right to develop their own perspective on life and to be able to act upon it. However illusory and ideological these claims may turn out to be, they are a reality which cannot be overlooked' (Beck 1986/1992: 92).

[10] 'As soon as people enter the labor market, they experience mobility [and] are forced to take charge of their own life. The labor market, by way of occupational mobility, place of residence or employment, type of employment, as well as the changes in social location it initiates, reveals itself as the driving force behind the individualization of people's lives. They become relatively independent of inherited or newly formed ties (e.g. family, neighborhood, friendship, partnership) (…). By becoming independent from traditional ties, people's lives take on an independent quality which, for the first time, makes possible the experience of personal destiny' (Beck 1986/1992: 94).

[11] 'Schooling means choosing and planning one's own educational life course. The educated person becomes the producer of his or her own labor situation, and in this way, of his or her social biography. As schooling increases in duration, traditional orientations, ways of thinking, and lifestyles are recast and displaced by universalistic forms of knowledge and language. Depending on its duration and contents, education makes possible a certain degree of self-discovery and reflection. The educated person (…) becomes an agent of reflexive modernization. (…) For it is after all only possible to pass through formal education by individually succeeding by way of assignments, examinations, and tests. Formal education in schools and universities, in turn, provides individual credentials leading to individualized career opportunities in the labor market' (Beck 1986/1992: 94).

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the protections provided by the welfare state' (italics added – T.D.) (Beck 1986/1992: 92-93).[12] In other words, as the individualization develops, social inequalities may intensify, but they become more and more, as it were, 'post-class,' i.e. based around new lines of either ascribed or achieved characteristics (the former being race, skin color, gender, ethnicity, age, homosexuality, physical disabilities etc.; the latter like level of education, privileges or disadvantages connected to particular occupations or sectors of the labor market etc.). Thus, inequalities do not disappear, but they become instead redefined in terms of an individualization of social risks. In the second (reflexive) modernity, argues Beck, it is the individual that becomes the reproduction unit of the society (Beck and Beck-Gernsheim 2002: 1-53; 202-213). Social problems become increasingly perceived in terms of psychological dispositions. At the same time social groups lose their distinctive traits, both in terms of their self-understanding and in relation to other groups, and as a consequence a new immediacy between the individual and the society emerges (Beck 1986/1992: 100).

A similar account of an increasing decomposition of class systems and the decreasing relevance of class analysis for the understanding of contemporary advanced societies was offered by two Australian sociologists, Jan Pakulski and Malcolm Waters, in their 1996 book *The Death of Class*. They argue that despite the fact that the concept of social class has always stirred up heated debates between social scientists, it has nevertheless achieved an almost hegemonic status within the field of social science and used to be a 'master term' for both sociology and political science. However, since the 1980s, the term has begun to lose its centrality both within the academic research and in the realm of politics. As a consequence, social scientists have increasingly begun to share a growing skepticism about the compatibility of class models with the contemporary social reality; class divisions have lost their self-evident and pervasive character. Additionally, the end of the Cold War allowed academic discussions about the salience and meaning of class to become finally impartial[13] and disentangled from previously existing political and ideological limitations (Pakulski and Waters 1996: 1-2).

Pakulski and Waters define classes as clusters of individuals that are formed on the basis of property and/ or market relations. However, they do not consider class only as a simple statistical category, because class *qua* social class

[12] For more on the notion of precariousness, especially in the context of the so-called 'flexible forms of employment relations,' see Bologna (2006).
[13] One might add, to an average degree of impartiality achievable in any ordinary discussion in the social sciences.

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must transpire in detectable patterns of exploitation, struggle, domination and subordination, or closure. The number of classes, the extent of polarization, the clarity of class boundaries and the extent of conflict between classes may vary because they are not definitional elements [of class]. However, a *minimum level of detectable clustering or groupness is essential if we are to say that classes exist. A society in which such economically caused social clustering occurs, and where these clusters are the backbone of the social structure, is a class society* (italics added – T.D.) (Pakulski and Waters 1996: 3).

In such a society, property and market relations are 'the skeleton of social structure' and 'the predominant grid of social power.'[14] However, the articulation of class and the extent to which it structures society are matters of historical variance. In other words, among class societies one can observe different 'degrees of classness': from the minimal level where classes exist solely as economically based social clusters of individuals,[15] to the advanced level where 'classes are well articulated in the social, cultural, and political-ideological domains, class identifications predominate, class consciousness is acute, and politics is dominated by struggles between class-based groups and organizations' (Pakulski and Waters 1996: 3). As the argument goes further, societies in which capitalism has been developing without interruptions, have gone through two different stages of the development of the class society (Pakulski and Waters 1996: 25, 88-89, 112):

1. The period of economic-class society (lasting until around 1900) – that is a society arranged into patterns of domination and struggle between interest groups that emerged from the economic realm. This type of society was characterized by a radically unequal distribution of (mostly) privately owned and (usually) familially inherited property; the family was the sole and effective site for class reproduction. The dominant class (i.e. property owners/ employers) could control the state and maintain itself as a ruling class either by capturing its apparatuses, or by rendering them weak. The subordinate class (i.e. sellers of labor power/ employees) – if it

[14] It does not mean that non-class societies (an umbrella term under which the authors include so historically and geographically distant cases as the ancient slave-owning societies of Greece and Rome, the estate societies of feudal Europe, the XXth century state-socialist societies, or the "post-class" societies that they claim are currently emerging in the most advanced capitalist countries) were/ are equal, non-stratified, or non-conflictual: social divisions and conflicts are inherent in all types of human society, however, they do not have to always crystallize along the class lines (i.e. around property and market relations) (Pakulski and Waters 1996: 3, 147).
[15] But even in such a case it is still the class – and not other factors, like one's level of education, gender or ethnicity – that plays a predominant role in determining life chances of people.

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undertook any collective action at all – was rebellious or revolutionary in character and aimed at dislodging the ruling class by the abolition of private property. Matching class divisions, culture was then divided into dominant and subordinate ideologies and into high and low cultures.

2. The period of organized-class society (lasting roughly from 1900 to 1975) – that is a society dominated by a political or state sphere. It was the time of reorganization of the property relations: the gradual emergence of shareholder corporations facilitated the dispersal of ownership and tended to separate it from the control over the management of companies.[16] This in turn enabled the state to dominate the economy through the enactment and exercise of large-scale programs of the redistribution of private property or by the conversion of private property into a public one (although the latter step did not have to be necessarily taken). In the period, it was the educational system organized on the level of the nation-state that became a critical vehicle for socioeconomic reproduction: the allocation of persons to labor market positions occurred at least as much in terms of individual ability, good fortune and the capacity of schools to develop talent as it did on family background. A political-bureaucratic elite which used the state's coercive power to regulate economics and culture was typically in charge of the state. The elite may have been factionalized horizontally into formally opposed parties; it comprised of a corporatized leadership integrating party leaders with the leaders of other organized, economic or cultural, interest groups. Masses, in turn, reorganized themselves in national-political classes rather than in industrial ones by establishing links with milieu parties. Meanwhile, the cultural realm became unified under the state umbrella or under the aegis of state-sponsored monopolies, turning thus into an industrialized or mass culture.

The last thirty or so year, since 1975, have seen – first in the advanced capitalistic countries of the then West and in the newly industrializing countries of East and South East Asia, and later gradually in other parts of the world – a transition to a new type of social order beyond the class society. In such a 'status-conventional society' stratification emerges from the cultural sphere. The strata are lifestyle- and/or value-based status configurations formed around differentiated patterns of value commitment, identity, belief, symbolic meaning, taste,

[16] For the classic analysis of the phenomenon of the „managerial revolution", see Berle and Means (1932) and Burnham (1941); for the analysis of historical trends of change in the structure of industrial societies since Marx, see Dahrendorf (1959: 36-71).

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opinion or consumption. Because of the ephemeral and fragile nature of these resources, a stratification system based on conventional status communities could easily lead to the destabilization of the state – which is weakened because it cannot rely on mass support any longer; and the economy – which, because of the critical importance of symbolic values, loses its capacity for social structuring. Thus, the stratification system is moving into a culturalist or status-conventional phase. To put it differently, in the status-conventional society both the state and the economy are deconcentrated by a prevailing orientation to values and utilities that are established conventionally rather than by reference to collective interests. The reproductive lineaments of class are disappearing: the mobile, biographically self-composing individual now becomes the central site for societal reproduction. The status-conventional society need not – and in fact, given empirical data, should not – be theorized as either egalitarian or harmonious. Its hierarchies are discrete and its structure becomes more and more complex, yet in a different way from the structure and hierarchies of the typical class societies of the industrial era. Thus, although a transition from the organized-class society to the status-conventional society does lead to a decline in class inequality and conflict, it does not bring about a general decline in inequality and conflict[17] (Pakulski and Waters 1996: 25, 88-89, 112, 149-158).[18]

The fourth major critique of the usefulness of the concept of social class and of the class theory for the study of inequality in contemporary advanced societies was recently formulated by an American sociologist Paul W. Kingston (2000). Kingston adopts what he calls a 'realist' approach to class: namely, he defines it simply as a relatively bounded social group whose members have a common economic position and share distinct, life-defining experiences (Kingston 2000: 9). According to him, classes exist to the extent that class location – an objective position within the economic order – significantly shapes the fundamental content of social lives. The distinctive analytical power of various (i.e. both post-Marxian and post-Weberian) class theories derives from their claim that classes are a central, enduring feature of social organization. To be viable, however, any class theory

[17] Even the increasing inequality of income – which the authors admit took indeed place in the 1990s – is not an evidence of increasing class inequality but rather a sign of increasing inequality of sumptuary capacity linked directly with the status-conventional stratification. 'The income-poor so-called ''underclass'' is not class defined but is rather status defined by the symbolizations attached to postcolonial migration, race, ethnicity, gender, age and pattern of family support. Exclusionary closure based on these status attributes consigns people to an ''underclass''. The stigmatization that attaches to the ''underclass'' is a function not of its members' exploitation but of their incapacity to consume' (Pakulski and Waters 1996: 157-158).

[18] For a more recent elaboration of arguments that the complexity of the contemporary world requires the abandoning of class analysis and class theory altogether and a need for the development and further refinement of 'post-class' tools for the analysis of the new patterns of inequality, see Pakulski (2005).

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should not only be able to define specific social divisions as consequential in both individual and collective life, but it must also show that these divisions correspond to the collective realities that people experience and perceive.

The key organizing concept in Kingston's analyses is that of structuration, which – following Giddens – he defines as 'the modes in which ''economic relationships'' become translated into ''non-economic'' social structures' (Giddens 1973: 105). Thus, the stratifying force of class can be variable and its reality can be discerned only in how people carry out their lives. The formation of classes depends on a similarity of experience – the similarity in the workplace and labor-market experiences, as well as the similarity in related community-based experiences. Contemporaneously, however, one can witness three developments that undermine class structuration: a) economic differentiation, b) high levels of inter- and intragenerational mobility, and c) the widespread availability of transportation and information technologies that break down local solidarities. Taken together, these three different developments increase the diversity of people's experiences, thus undermining class structuration.

In the contemporary United States, Kingston argues, the class structuration is weak, which means that, for the most part, groups of people having a common economic position do not share distinct, life-defining experiences. Therefore, class theories misrepresent the structure of inequality in contemporary American society. The absence of class inequality, however, does not mean the end of inequality in general and does not usher in an era of egalitarianism and social harmony, in which conflicts on distributional matters no longer exist. Nevertheless, Kingston says, even the existence of substantial degrees of economic inequality (as in the case of the contemporary USA)[19] does not have to imply the existence of classes and might be more parsimoniously explained by models derived from the stratification theory.[20]

[19] For a recent account of the rise of social and economic inequalities in the USA, see e.g. Gordon and Dew-Becker (2008); Goldin and Katz (2007); Lemieux (2007); Reich (2007); Weeden et al. (2007); Alesina and Zeira (2006); Gabaix and Landier (2006); Autor et al. (2006); Autor et al. (2005a); Autor et al. (2005b); and Feenstra and Hanson (2001). For a comparative approach, see e.g. DiPrete (2006) and Pontusson (2005). For income trends in the 1990s and the early 2000s Germany – the biggest European economy, see Grabka and Frick (2008).

[20] Kingston considers the stratification theory as the main theoretical alternative to various class theories and suggests that it is the former that should be further elaborated in order to realistically account for patterns of inequality emerging in contemporary advanced societies. According to him, three propositions define the stratification perspective:

1) There are at least several critical dimensions of social hierarchy – e.g., income, occupational prestige, cultural valuation.

2) Each of these dimensions has many levels of rank; the hierarchies reflect multirung ladders of continuous gradation.

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All hitherto existing class theories are based on the following premises (Kingston 2000: 209-210):

1. Class, at its core, is an economically rooted phenomenon, no matter whether relations to the means of production or market capacities are stressed. It may have cultural or political components or ramifications as well, but economic roots are essential for its understanding and conceptualization.
2. Classes exist only if one can empirically demonstrate that there are relatively discrete, hierarchically ordered social groups, each with distinctive common experiences (a realist orientation to class analysis).
3. If classes are real, one should be able to identify their "members" and show that these individuals tend to have distinctive experiences (the principle of methodological individualism which underlies the realist assessment of class existence).
4. Five dimensions of structuration (inter- and intragenerational mobility patterns, social interaction patterns, cultural orientations, class sentiment, and political action) represent the main features of social life. Class structuration should be considered as a multidimensional variable, without according *a priori* primacy to any of the above-given dimension, much less insisting that reality of class depends on strong structuration in each dimension. However, classes are more real as social entities to the extent that structuration is apparent in each of these terms.

Kingston supports his argument about – to borrow the phrase from Daniel Bell's seminal work – 'the coming of the classless society' (which, to emphasize once again, does not mean the fulfilment of any kind of harmonious, abundant, and egalitarian social Utopia) by pointing to a number of studies, conducted mainly in the United States at the end of the last century. Taken together, he argues, these analyses bearing on structuration significantly undermine the foundations of class theory. A brief recapitulation of the main findings of these studies is given below (Kingston 2000: 210-212).

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3) A person's rank on one dimension is not necessarily linked to rank position on other dimensions, and indeed some discrepancies are likely.
Thus, the stratification perspective contends that individuals do not 'cluster' as large stratified groups; rather, they experience multiple hierarchical distinctions of degree, with some variation in their relative position across hierarchies (Kingston 2000: 7-8).

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1. Classes are not demographically well-formed groups. The ‘members’ of all classes have diverse class origins – to the point that substantial majorities of conventionally defined classes were raised in a different class from their own. While the overall correlation between class origins and destinations is quite modest, intergenerational mobility may be somewhat more regular within both blue-collar and white-collar categories than across them. However, the analyses on this point are not fully consistent. Because this divide is so frequently traversed, it cannot be portrayed as a fundamental barrier delimiting life chances. It is worth emphasizing that all the mobility largely reflects structural changes in the economy and, concomitantly, in the relative size of various classes. The fact that a so-called social fluidity is modest speaks to the failure to realize egalitarian ideals, but it is total gross mobility that bears on class structuration. For whatever the cause of the mobility, the result is that the American class system is not marked by intergenerational social closure. Moreover, people are far from routinely stuck in the same type of job in their own career. Very often, they ‘belong’ to different classes throughout their lives, a fact that undermines the meaning of ‘belonging.’ The professions and some skilled crafts are partial exceptions, being more closed off than other occupational categories.[21]
2. Class does not substantially shape patterns of social association. To the extent that structuration occurs, it may be most evident among an upper middle class of professionals and managers, but because cross-class friendships and neighbors are generally so common, the class system is not socially reinforced as a set of distinct cultural groups.[22]
3. There is little support for the reality of separate class cultures. Middle-class (i.e., white-collar) families may be slightly more inclined than working-class families to value self-direction in their children, but other important aspects of domestic life (including marital relations) appear remarkably similar from top to bottom in the class hierarchy. Moreover, class does not significantly affect a lot of attitudes on social issues, values and lifestyles, and communal attachments and socializing.[23]

[21] For more details, see Kingston (2000: 60-86).
[22] For more details, see Kingston (2000: 149-158).
[23] For more details, see Kingston (2000: 119-148).

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4. The connection between objective class position and class consciousness is weak. And if large numbers cannot place themselves in the 'right' class, other indicators of class membership having common class consciousness are even less discernible.[24]
5. As a predictive variable for political orientations, class position generally accounts for little and in many respects verges on the irrelevant. At the individual level, class cleavages do not express political cleavages.[25]

Moreover, 'classes do not seem to persist in any highly differentiated, technologically sophisticated economy' (Kingston 2000: 212) – at least for this reason, suggests Kingston, as regards the decline of the importance of class divisions, the United States are not exceptional.[26] As the result of the great structural mobility that all advanced societies have experienced, the common condition in all of them is that – notwithstanding some minor exceptions – members of all classes have highly diverse origins. In other words, all competing class maps (be they Goldthorpe's or Wright's) are substantially deficient and in any developed society none of them points any longer to basic fissures defining the contours of social life.

The above-given presentation of four different 'post-class' positions could succinctly be summarized as follows. Although the new social order emerging in the most economically and technologically developed free-market societies is certainly not going to be free of external and internal social conflicts about the unequal access to various economic resources – these conflicts will not (or will to a constantly decreasing degree) be fought along class lines (no matter whether drawn according to the post-Marxian or post-Weberian blueprint). As the individual increasingly becomes the reproduction unit of the society, patterns of social inequality become more complex and their proper description and explanation require from social scientists a new cognitive map of social inequalities. Social class as an analytical category has become obsolete and can no longer be used for the purpose of studying different aspects of social inequality in most of the contemporary societies. Thus, a new set of theoretical tools (that has not been yet fully developed) is needed to conduct the analysis of different forms of inequality in the contemporary world.

[24] For more details, see Kingston (2000: 87-100).
[25] For more details, see Kingston (2000: 101-118).
[26] For more details, see Kingston (2000: 189-208).

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2.3. New approach to class analysis: micro-class analysis

Arguments that class is – to use Beck's expression – a 'zombie category' that explains little, if anything, of various aspects of contemporary social life (first of all – of the new emerging patterns of social inequality) inspired attempts at refining and reshaping class analysis. The present section focuses on a new, micro-analytical approach to class analysis developed by two American sociologists, Kim Weeden and David Grusky (Weeden and Grusky 2005a, Weeden and Grusky 2005b).[27]

Weeden and Grusky argue that over the last 25 years, the primary goal of class analysis has shifted from developing accounts of macrolevel outcomes (such as for example revolutions) to explaining variability in individual-level life chances, attitudes, and behaviors. Such a change of a rationale of the analysis, though, has not yet resulted in devising new class maps that would better fit the new 'microlevel agenda.' As it were, the new ends of class analysis require new means as well – therefore new tools are needed. In other words, the argument that in contemporary advanced societies 'class is dead'[28] – is flawed. Its proponents do not take into consideration that the declining explanatory power of conventional class models might mean that for the purpose of analyzing micro-level outcomes (such as life chances, attitudes, and behaviors) conventional class schemes – originally designed for dealing with macrolevel outcomes in mind – have been poorly operationalized. There is still a possibility, argue Weeden and Grusky, that – contrary to what scholars like Kingston or Pakulski write – even in contemporary developed societies (which are supposed to be prone to a growing social fragmentarisation and to an increasing complexity of patterns of social inequality) social classes remain well formed and only appear to have weak effects because they are poorly operationalized.[29] The only way to find that out is to construct new, micro-

[27] The scheme fits in with the Durkheimian tradition of research on the division of labor and changing forms of (occupational, or occupation-based) solidarity in modern societies (Grusky and Galescu 2005). It was developed gradually in the course of polemics with opponents of the class analysis. I the section, I rely on its most recent, empirically tested version available at the time of writing the June paper. For previous contributions in favor of class analysis that lead to formulation of the micro-analytical approach, see Grusky and Sørensen (1998), Grusky et al. (2000), Grusky and Sørensen (2001), Weeden (2002), and Grusky and Weeden (2001, 2002). For a critical discussion about the last two articles, see Adams (2002), Birkelund (2002), Goldthorpe (2002), and Therborn (2002).

[28] Because conventional class analysis – e.g. in the form of Erikson and Goldthorpe's class scheme or Wright's class scheme – shows that attitudes and behaviors arising from a 'complex mosaic of taste subcultures' are unrelated, or related only to a little extent, to class membership.

[29] 'In large part, the retreat from class analysis should be blamed on class analysts themselves, because they continue to resort to old class categories that are no longer deeply institutionalized in the labor market, if ever they were. The main empirical cost of using such categories is that they are poorly correlated with the life conditions that they are supposed to represent and the individual-level behaviors that they are supposed to explain. This empirical weakness of big classes (e.g., Kingston 2000) has unfortunately led to strong and

class schemes and to empirically test their explanatory power in comparison with conventional, 'big-class' models.

The assumption that Weeden and Grusky find most problematic in conventional class models is the one stating that the site of production[30] is organized into a small number of big classes (e.g., 'service class,' 'routine non-manual class'):

> This 'bigclass assumption' allows class analysts to ignore or dismiss the smaller social groups (i.e., 'occupations') that emerge around functional niches in the division of labor and that typically become deeply institutionalized in the labor market, [while] occupations have considerable explanatory power by virtue of this institutionalization. Indeed, whereas big classes affect individual-level outcomes primarily through a rational action mechanism (e.g., Goldthorpe 2000), occupations shape behavior through the additional sociological forces of self-selection, differential recruitment, socialization, and interactional closure, all of which become activated in the context of institutionalized categories. It follows that *occupations are better suited than big classes for the new microlevel agenda of explaining individual-level behaviors and attitudes* (italics added – T. D.) (Weeden and Grusky 2005a: 142).

If the new objective of class analysis is to determine how and why individuals are allocated to different life conditions, the analyst should use a class scheme that successfully captures variability in life conditions. Thus,

> the main rationale for developing a new microlevel map is that much of sociology is [nowadays] oriented toward the microlevel task of teasing out the strength and pattern of class effects, a task that is compromised insofar as class maps do not maximize explanatory power (…) insofar as conventional big-class models fail to capture the explanatory power available at the site of production, much sociological research may be subject to the omitted variable bias that arises when class effects are only partly purged. It follows that researchers who wish to control for class should also use a class map that is tailor-made for the microlevel research objective (Weeden and Grusky 2005: 147).

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overstated claims about the declining importance of the site of production itself (esp. Hall 2001). That is, postmodernists and other critics of class analysis have ignored the possibility that the site of production is well organized at the local level and that conventional class analysts, by virtue of their obsession with big-class formulations, have simply failed to capture this local structure' (Weeden and Grusky 2005a: 182-184).

[30] The term 'site of production' is referred to the social and organizational setting within which goods and services are produced (Weeden and Grusky 2005a: 142).

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For these reasons Weeden and Grusky come up with a new, highly disaggregated scheme of 126 occupations (Weeden and Grusky 2005) which they subsequently compare with conventional big-class[31] and gradational representations (SES, prestige, cultural capital, and Bourdieu scales) of the site of production (Weeden and Grusky 2005a: 157-159). The authors check whether class effects can be strengthened by replacing the nominal categories of big-class maps with more deeply institutionalized microclass categories. The comparison entails assessing the strength of the bivariate relationship between the Erikson-Goldthorpe, Featherman-Hauser, and a new disaggregated class schemes on the one hand and various life conditions (e.g., life chances, lifestyles, cultures etc.) on the other hand. Results of their empirical analyses corroborate Weeden and Grusky's claim that the micro-class scheme performs better than either big-class schemes or gradational scalings in predicting micro-level outcomes concerning life chances, lifestyles, cultures etc. (Weeden and Grusky 2005a: 164-182).[32]

It appears then that the debate on the validity and the relevance of the notion of social class for the study of social inequalities in the XXIst century is far from over in sociology. Although heavily criticized as belonging to a by-gone era, the concept – after some empirically-supported reformulations – seems to retain its usefulness for the social inquiry. However, whether it explains various contemporary aspects of social inequality or whether it should be discarded and dropped from the sociological usage – still remains a question open to further studies. Hence, the project I hereby submit for consideration aims to put the notion of social class, although only in its 'big-class' version of Erikson-Goldthorpe scheme, for the empirical test: it intends to look at how well does this scheme account for the digital inequality among youth in contemporary societies. The digital inequality has gained importance as a new aspect of social inequality in contemporary advanced societies. However, before I introduce this notion and its importance in the overall studies of

[31] I.e. seven-class version of Erikson and Goldthorpe scheme (Erikson and Goldthorpe 1992: 38-39) and 12 class version of Featherman-Hauser scheme (Featherman and Hauser 1978).

[32] Weeden and Grusky claim that their 126-category scheme is a substantial improvement over aggregate class models because microclasses are institutionalized social groupings that capture far more of the big class-based structure than big classes. New scheme's main purpose is 'to identify structural positions at the site of production that provide the strongest possible signal of ''life conditions'', where this refers to the panoply of circumstances that define the quality and character of our social lives, including the economic flows and resources that we control, our institutional affiliations and commitments, the types of lifestyles that we lead, and our sentiments and attitudes. This class concept is not very demanding; after all, classes that are fine-tuned to the microlevel agenda do not need to embody antagonistic interests, act collectively on behalf of these interests, or bring about fundamental macrolevel change. These more ambitious claims, while not developed here, may nonetheless be defensible for our new class map. (…) Here, however, we focus on the more delimited task of defining categories that capture the available structure at the site of production and hence are good information-conveying ''containers''' (Weeden and Grusky 2005a: 143-144).

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contemporary social inequality more thoroughly – I cannot omit the issue of the changing gender relations and their influence on the intergenerational transmission of social inequality.

2.4. Women and the intergenerational inheritance of social position in contemporary developed societies

This section deals with the problem of the role of women in the social structure of contemporary advanced societies and the extent to which social positions occupied by women influence the life chances of the following generation. The section is based on the comparison of the appropriateness of different theoretical and empirical concepts for modeling the influence of social origin on the children's educational attainment. The comparison is made for three Western industrialized countries: the Netherlands, West Germany, and the United States.[33]

Korupp et al. (2002) begin their study with an overview of six models of parental background's influence on children's educational attainment commonly used in the social research.

The so-called 'conventional view' (or model) holds that class positions of families are established by including the resources of the father only (Goldthorpe, 1983, 1984) and claims that although (especially recently) many women have entered (temporarily or permanently) the labor market – they continue, nevertheless, to rely on their husband's socioeconomic achievement for the greater part of their life. As a consequence, the conventional view leads one to expect that only the father's education and occupational status background determine the educational attainment of his children. The mother's status background has no additional influence.

The 'Dominance Model' holds that the member of the household with the highest socioeconomic status determines the status position of the family. It is implied that usually the father holds the highest status position. However, if the mother has a higher status

[33] The Netherlands were represented by two Households surveys, the Netherland Family Survey 1992-1993 (FAM) and the Households in the Netherlands 1995 (HIN); The German Life History Study (GLHS) represents West Germany. This survey was completed in 1983 (for the birth cohorts 1929-31, 1939-41, and 1949-51) and in 1989 (for the birth cohorts 1954-56 and 1959-61. The United States was represented by the first wave of the National Study of Families and Households (NSFH) completed in 1988. To allow for comparability, for all countries the analysis was limited to respondents born between 1923 and 1962 with a valid entry for their final educational level. The educational attainment of the respondent and his or her parents was the number of years of education. The mother and the father's occupational status were scaled by the ISEI index (Korupp et al. 2002: 21-22).

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occupation, the model proposes that she should form the basis of the analysis (Erikson, 1984).

Korupp et al. propose a modified version of that model, which they call a 'Modified Dominance Model'. It assumes that the influence of the lower status parent should be considered as well. Because the lower status parent contributes to the transfer of parental resources to children, it does not suffice to consider only the parent with the higher status position to cover the status background of children.

The 'Joined Model' assumes that if parents' status positions differ from each other, children tend to be intermediately positioned between their father and their mother's status position (Sørensen 1994). Therefore, it is the average parental education and occupational status that should present the SES background of the child most adequately.

The 'Sex-Role Model' assumes that daughters are oriented towards mothers and sons are oriented towards fathers. It hypothesizes that, compared with the father, the mother's educational and occupational status is important only for the daughter; and that compared with the mother, the father's socioeconomic influence is important only for the educational attainment of the son (Smith and Self 1980; Acock and Yang 1984; Boyd 1989; Huttunen 1992; Starrels 1992; Updegraff et al. 1996).

Finally, the 'Individual Model' argues that – through increased female labor market participation – mothers have gained not only financial resources but also have tilted the authority relations within the family away from the father, towards the mother (Lopata 1994) and that therefore mothers have increased their influence at home regarding crucial questions on e.g. children's education. The model assumes that it is the contribution of each parent individually that influences the educational success of the children. Accordingly, each parent's attributes should be considered on an individual basis (Acker 1973; Erikson and Goldthorpe 1992; Sørensen 1994).

After conducting their analysis, Korupp et al. conclude that:

> The Modified Dominance Model that classifies the SES of both parents hierarchically (into a higher and lower status parent) fits the data best. (…) Our results have produced conclusive evidence for the argument that, within the family, the resources of the lower status parent are important for the educational attainment of children. In the introduction we suggested that the mother's influence possibly has become more important in recent years, compared to that of the father. (…) No evidence is produced for this case. On the contrary, historical trend of parental influence on the

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> child's education is the same for the mother as it is for the father. A 'joined' trend measure for the father's and the mother's influence captures this development best. The Joined Model holds that mother's and father's status operate in an identical way. It is a good 'second best' solution to the leading Modified Dominance Model. If the status of the mother and the father differ, it seems to be the case that children are not unequivocally pulled towards the higher status parent's platform, but range somewhere between them (Krupp et al. 2002: 37).

As a consequence, the authors recommend using both parents' socioeconomic background to study patterns of intergenerational status transfer. Following their suggestions, I am going to use information on both mother's and father's occupational and educational status in the following empirical chapters of my dissertation. One should use information about family structure as one of the control variables, because the rise of divorce rates and the increase in numbers of the single-parent families have been a common trend throughout much of the developed world (Blossfeld and Timm 2003; Castells 2001b: 134-156, 221-242); and because – at the same time – the single-parent families still on average have a limited (relative to dual-parent families) amount of monetary and non-monetary resources that can be invested in children (see, e.g. – Garib et al. 2007; Pong et al. 2003). Unfortunately, because the 2006 wave of the PISA study does not provide such information, I am forced to forgo investigating this aspect of social inequality in the analyses reported in the subsequent chapters of this dissertation.

2.5. The concept of digital inequality

This section introduces the notion of digital inequality that is going to be (apart from the notion of social class) the second main theoretical framework informing my research. The below-given account proceeds chronologically – from the earliest conceptualizations of the notion denoting the inequality in access to the media (the latter understood as channels of information exchange), to a recently elaborated theoretical instrument for describing and measuring different aspects of access to the computer-mediated Information and Communication Technologies.

Although the concept of digital inequality has been elaborated only recently and specifically so for the study of access to the ICTs, its origins can be traced back to the research carried out over forty years ago on the diffusion of knowledge about science and other public issues among the general public (mass media audience). A so-called ‘knowledge gap hypothesis’ was formulated as follows:

> As the diffusion of mass media information into the social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between these segments tend to increase rather than decrease. This ‘knowledge gap’ hypothesis does not hold that lower status population segments remain completely uninformed (or that poor in knowledge get poorer in an absolute sense). Instead, the proposition is that growth of knowledge is relatively greater among the higher status segments (Tichenor et al. 1970, 159-160).

Since 1990s, with the emergence of the Internet and other ICTs and the accompanying concern about providing the access to new digital media (especially among already underprivileged social groups and categories), the above-mentioned hypothesis inspired much of the early research (at least that which aimed to go beyond simple descriptions[34]) on the inequality in access to computers and the Internet (Bonfadelli 2002, van Dijk 2000, de Haan 2004, Hüsing and Selhofer 2004). Initially, both academic and policy-oriented debates about the inequality in access to computers and the Internet were framed in terms of the ‘digital divide’, i.e. a clear gap between those individuals and groups that possessed material access to the new technology and those who did not. However, it quickly became apparent that the early definitions of access were defined too narrowly, too technically, and that the digital divide should be considered as a much more ‘complex and dynamic phenomenon’ (van Dijk and Hacker 2003). Therefore, in their subsequently widely quoted paper that became an important point of reference for those involved in the research on computer and the Internet accessibility, DiMaggio et al. defined the digital divide more broadly as the ‘inequalities in access to the Internet, extent of use, knowledge of search strategies, quality of technical connections and social support, ability to evaluate the quality of information, and diversity of uses’ (DiMaggio et al. 2001: 310). Furthermore, it was still being argued that the notion of ‘divide’ is a misleading one and that it should be substituted with a more nuanced and

[34] First major reports on the access to computers and the Internet commissioned by the U.S. Department of Commerce – which were based on large scale representative surveys of the American population and which drew attention to the problem of inequality in access to ‘new Information and Communication Technologies’ – were of a descriptive character and lacked theoretical foundations (cf. NTIA 1995, NTIA 1998, NTIA 1999, NTIA 2000, NTIA 2002).

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comprehensive term (e.g. ‘deprivation’ or ‘inequality’) (Gordo 2003; Hargittai 2003). According to the Dutch sociologist and media researcher Jan van Dijk, using ‘digital divide’ as a metaphor for describing inequalities in access to ICTs within and between contemporary societies created at least four pitfalls:

> First, the metaphor suggests a simple divide between two clearly divided groups with a yawning gap between them. Secondly, it suggests that the gap is very difficult to bridge. A third misunderstanding might be the impression that the divide is about absolute inequalities between those included and those excluded. In reality most inequalities of access to digital technology observed are of a relative kind. A final wrong connotation might be the suggestion that the divide is a static condition while in fact the gaps observed are continually shifting (van Dijk 2008: 2).

To study problems of the unequal access to computers and the Internet properly – as DiMaggio et al. argued (2004: 30-31) – one should take into consideration at least five dimensions. Each one is likely to shape significantly the experience that users have online, the uses to which they can put the Internet and the satisfactions they draw from it, and their returns to Internet use in the form of such outcomes as earnings or political efficacy. These dimensions are:

1. The variation in the technical means (hardware, software, and connections) by which people access the Internet;
2. The variation in the extent to which people exercise autonomy in using the Web – for example whether they access it from work or home, whether their use is monitored or unmonitored, and whether they must compete with other users for time online;
3. The inequality in the skill that people bring to their use of the medium;
4. The inequality in the social support on which Internet users can draw;
5. The variation in the purposes for which people use the technology.

A multidimensional definition of digital inequality recently proposed by van Dijk covers almost all of the above-mentioned dimensions (the question of the inequality of the kind of social support available for the potential or actual Internet users – although not mentioned explicitly by van Dijk’s framework, could nevertheless be easily “fitted-in” within it with an additional battery of questions). Van Dijk distinguishes the four kinds of access to

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digital technologies that correspond to the four types of digital inequality (van Dijk 2005: 20):

1. Motivational or psychological (motivation to use digital technologies, fear – or a lack thereof – of using them);
2. Material or physical (possession of computers and Internet connections or permission to use them and their contents);
3. Skills (possession of digital skills, i.e.: the ability to operate hardware and software, the ability to search for information using them, and the ability to use information retrieved in this way for improving one's position in society);
4. Usage (number and diversity of computer applications used, usage time etc.).

Van Dijk's definition of digital inequality and the corresponding definition of access to the computer-mediated-communication technologies is, so far, the most nuanced attempt to conceptualize the phenomenon of an unequal distribution of access to digital technologies both between societies and within them. The four above-mentioned kinds of access cover the most important dimensions of the phenomenon of digital inequality: dimensions, it is noteworthy, that up until recently have often been denied their particular importance and which have used to be altogether dropped from the agenda of the digital divide research, that in its turn (usually) focused only on the material or physical aspect of access to computers and the Internet.

Because van Dijk's four-dimensional conceptualization of digital inequality offers a parsimonious, and yet not an oversimplified model of access to digital technologies, I want to use it in my empirical analyses.

2.6. The importance of digital inequality research for the contemporary study of social inequality

Why, however, one should be concerned at all with the problem of an unequal access to such ICTs as personal computers or the Internet? Aren't they just (and only) overrated gadgets? What is so special about these digital technologies that they merit a sociological investigation into the consequences of their diffusion? Finally, what kind of a link between

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the research on the availability of computer-mediated digital communication technologies and class analysis of contemporary societies could be made?

I address the above-mentioned concerns in this section. First, I present the theoretical arguments by Castells and van Dijk in favor of taking into account the ICTs' influence on the processes of social stratification. Second, I give results from two recently published empirical studies that suggest the persistence of digital inequality (in different developed countries of the world) and the existence of an income advantage for the Internet users among the American labor force. Based on these premises, and on the arguments made in previous sections, in the summary of this section I argue for the need and the usefulness of combining two – so far rather separate – research traditions: that of class analysis and that of digital inequality studies.

My argument that the Internet is not yet another technological gadget, but the innovation of significant social consequences, relies on Castells's seminal contribution to the recent debate on social transformation and the role that computer-mediated information and communication networks play in this transformation (Castells 2000; 2001a; 2001b; 2001c; 2001d; 2004). Following the American historian of technology Claude S. Fischer (1992: 1-32), Castells points out that the technology, understood as material culture, is one of the fundamental dimensions of social structure and social change.[35] According to him, it was the gradual development and diffusion of – as he calls them – 'microelectronics-based

[35] This does not mean the support for a strict technological determinism (a la Lewis Mumford or Marshall McLuhan) as the theory of social change. Both Fischer's and Castells's understanding of the role of technology could be interpreted as a kind of technological soft determinism, a perspective aptly described (although not with reference to works of those two authors) by Yochai Benkler (2006: 17-18): 'Different technologies make different kinds of human action and interaction easier or harder to perform. All other things being equal, things that are easier to do are more likely to be done, and things that are harder to do are less likely to be done. All other things are never equal. That is why technological determinism in the strict sense – if you have technology 't,' you should expect social structure or relation 's' to emerge – is false. (...) Neither deterministic nor wholly malleable, technology sets some parameters of individual and social action. It can make some actions, relationships, organizations, and institutions easier to pursue, and others harder. In a challenging environment - be the challenges natural or human – it can make some behaviors obsolete by increasing the efficacy of directly competitive strategies. However, within the realm of feasible – uses not rendered impossible by the adoption or rejection of a technology – different patterns of adoption and use can result in very different social relations that emerge around a technology. Unless these patterns are in competition, or unless even in competition they are not catastrophically less effective at meeting the challenges, different societies can persist with different patterns of use over long periods.'

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information technologies' that largely[36] contributed to creating a basis, indeed: an *infra*-structure, for the new type of social structure: the network society.[37] In his own words:

> Digital networks are global, as they know no boundaries in their capacity to reconfigure themselves. So, a social structure whose infrastructure is based on digital networks is by definition global. Thus, *the network society is a global society. However, this does not mean that people everywhere are included in these networks*. In fact, for the time being, most are not. But everybody is affected by the processes that take place in the global networks of this dominant social structure. This is because the core activities that shape and control human life in every corner of the planet are organized in these global networks. (…) The network society diffuses selectively throughout the planet, working on the pre-existing sites, organizations, and institutions that still make up most of the material environment of people's lives. The social structure is global, but most human experience is local. (…) Thus, *the imperfect globalization of the network society is*, in fact, *a highly significant feature of its social structure* (italics added – T.D.) (Castells 2004: 22).

Although in his view neither inclusion in nor exclusion from the full and meaningful participation in the network society can be reduced to using computers and the Internet; nevertheless, the lack of physical access and inability (or limited ability) to use these digital technologies – could serve as good indicators of 'deeper structural subordination and irrelevance' (Castells 2004: 24). This is so, because 'Core economic, social, political, and cultural activities throughout the planet are being structured by and around the Internet, and other computer networks. In fact, *exclusion from these networks is one of the most damaging forms of exclusion in our economy and in our culture*' (italics added – T.D.) (Castells 2001d: 3).

[36] But not solely: two other independent, but interrelated factors were in his opinion (1) a successful restructurization of capitalism following its structural crisis in the 1970s and the restructurization of the Soviet-style state-socialism that ended in failure a decade later; (2) and the impact of the 1960s and 1970s cultural social movements that aimed at increasing, extending, deepening, and redefining the meaning of the individual freedom vis-à-vis the state and private bureaucracies and conservative cultural traditions (Castells 2004:14-22) .

[37] Castells defines a network society as a society whose social structure is made of networks powered by microelectronics-based information and communication technologies. He characterizes its specific features as follows: 'A network is a set of interconnected nodes. A node is a point where the curve intersects itself. A network has no center, just nodes. Nodes may be of varying relevance for the network. Nodes increase their importance for the network by absorbing more relevant information, and processing it more efficiently. The relative importance of a node does not stem from its specific features but from its ability to contribute to the network's goals. However, all nodes of a network are necessary for the network's performance. When nodes become redundant or useless, networks tend to reconfigure themselves, deleting some nodes, and adding new ones. Nodes only exist and function as components of networks. The network is the unit, not the node' (Castells 2004: 3).

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For Castells, the most fundamental divide in the network society is a difference between what he calls a 'self-programmable labor' and a 'generic labor.' He defines the former as having

> the autonomous capacity to focus on the goal assigned to it in the process of production, find the relevant information, recombine it into knowledge, using the available knowledge stock, and apply it in the form of tasks oriented toward the goals of the process. The more our information systems are complex, and interactively connected to databases and information sources, the more labor needs the ability to use this searching and recombining capacity. This requires appropriate training, not in terms of skills, but in terms of creative capacity, and the ability to evolve with organizations and with the addition of knowledge in society (Castells 2004: 26).

At the same time:

> tasks that are not valued are assigned to 'generic labor,' eventually being replaced by machines or decentralized to low-cost production sites, depending on a dynamic cost-benefit analysis. The overwhelming mass of working people on the planet, and still a majority in advanced countries, are generic labor. They are disposable, except if they assert their right to exist as humans and citizens through their collective action. But in terms of value making (in finance, in manufacturing, in research, in sports, in military action, or in political capital) it is the self-programmable worker that counts for any organization in control of the resources (Castells 2004: 26).

In such a situation, continues Castells, the key social division (both internationally and within particular societies) becomes the differentiation of population between three categories: those who are the source of innovation and value (self-programmable labor); those who merely carry out instructions (generic labor); and finally those who are structurally irrelevant, either as workers (that do not have enough education and live in areas without the proper infrastructure and institutional environment for global production) or as consumers (too poor to be part of the market) (Castells 2004: 29). The last category differs from e.g. XIXth century Marxian proletarians first of all because it is not needed for the proper functioning of the (national or global) economy. One might say that it occupies what Weber described as 'a strictly identical class situation,' because it consists of 'persons who are

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completely unskilled, without property and dependent on employment without regular occupation' (Weber 1921/2001b: 142; see footnote 2).

Jan van Dijk, the second proponent of the theory of the network society, sees also the possibility of an inegalitarian development scenario of the new social structure. He writes that increasingly, the participation in all important fields of society (such as labor market and business, education, social relations, public and private space, culture, politics, and the official institutions of society – i.e. citizenship with entitlements) will depend, at least partly, on the type and level of access to the new digital media. As regards the education, he notes that more and more

> access to computers and the Internet will be necessary to achieve specific training. (…) Within 10 years, computers and the Internet will have become indispensable in education throughout the developed world. (…) The inescapable result is that people who do not have physical access will be excluded from an increasing number of educational opportunities. *Children in families lacking access are strongly disadvantaged compared to children who have computers and Internet connections at home. Access to computers and the Internet at school is only available during particular hours and for a limited number of children. Even in the developed countries, it is fairly common, even in 2005, that only one computer is available for every 10 to 20 pupils. Those who have the means at home are learning to work with computers much earlier, longer, and faster, even before they reach school years* (italics added – T.D.) (van Dijk 2005: 167; 170).

To sum up, both Castells and van Dijk claim that as computer-mediated communication networks increasingly permeate new spheres of social life – thus becoming an indispensable part of the civilizational curriculum – having the physical access to them and being able to use them effectively become conditions *sine qua non* for the full participation in the contemporary society. However, and in this point both authors agree too, both of these resources are distributed unequally – also within the context of advanced societies. Thus, broadly understood access to ICTs retains its structurizing power, also in the developed world.

Let us move now to the discussion of recent empirical results. The early contributions to the debate on the social consequences of the Internet development could easily be divided into two distinct approaches: on the one hand, there were cyber-optimists who argued that differences between advantaged and disadvantaged groups (or countries) would tend to

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disappear as the Internet disperses more widely (Cairncross 1997; Dyson 1997; Kelly 1998; Negroponte 1995; Compaine 2001); on the other hand, there were cyber-pessimists expecting – in line with the 'knowledge gap hypothesis' and the principle of cumulative advantage[38] – that people belonging to the already economically and socially disadvantaged groups would less likely have access to the Internet and abilities and chances to use it, which in turn would exacerbate the further growth of social inequalities (Angell 2000; Perelman 1998; Schiller 1996).[39] The second position has a strong support in Everett M. Rogers's theory of the diffusion of innovations. Based on the numerous empirical analyses of various processes of technological diffusion, Rogers (1995: 429-430) concludes that the diffusion of innovations generally leads to wider socioeconomic gaps among the members of a social system; and that without following special strategies these tendencies toward gap-widening cannot be effectively counteracted.

However, both of the above-mentioned groups considered the Internet use as a new resource contributing to the improvement of access to information, social networks, services, and other resources important in the contemporary society for achieving individual and collective wealth and welfare. Such an understanding of the role of the Internet is still shared by researchers engaged in the study of its economic and social implications (Dutton et al. 2007).

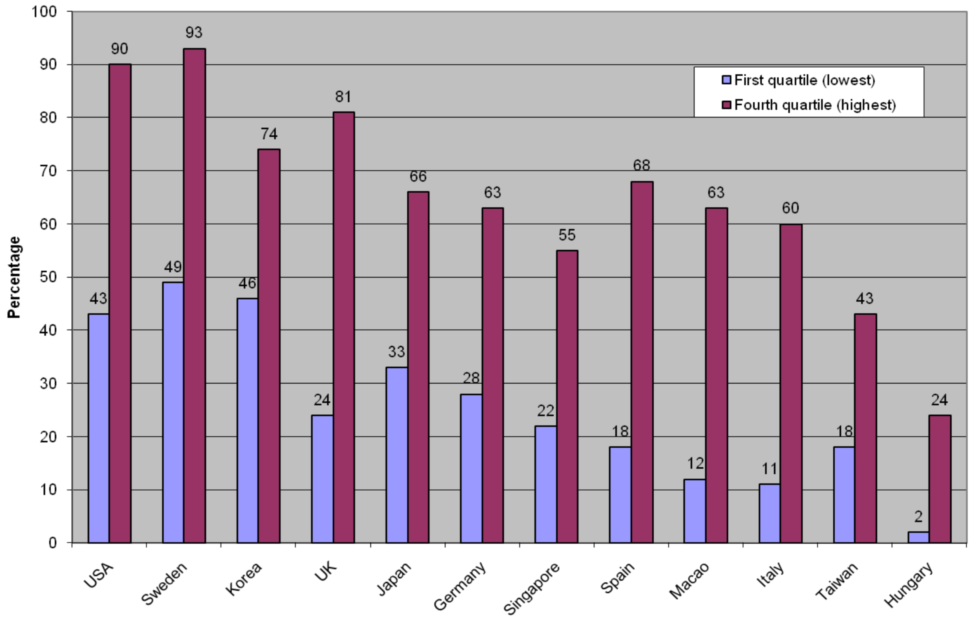
As the 2003 comparative study of the Internet in everyday life suggests,[40] economic status (measured by income) still determines the Internet usage in countries under study (see Figure 2.1). The authors summarize their results as follows:

> [T]he Internet is used more by the highest income quartiles in all twelve countries examined, with little evidence that the difference

[38] Merton defined the principle of cumulative advantage as the formula 'that operates in many systems of social stratification to produce the same result: the rich get richer at a rate that makes the poor become relatively poorer' (Merton 1973: 457).
[39] 'Enthusiasts predicted that the Internet would reduce inequality by lowering the cost of information and thus enhancing the ability of low-income men and women to gain human capital, find and compete for good jobs, and otherwise enhance their life chances (Anderson et al. 1995). By contrast, cyber-skeptics suggest that the greatest benefits will accrue to high-SES persons, who may use their resources to employ the Internet sooner and more productively than their less privileged peers, and that this tendency would be reinforced by better Internet connections and easier access to social support' (DiMaggio et al. 2001: 310). In other words, the early expectations about the impact of the Internet 'have continued to range from optimistic Utopian scenarios that emphasize the positive implications of Internet diffusion for social interaction, civic involvement and social inclusion, to a pessimistic dystopian focus on the potential negative implications of Internet adoption for social isolation, disengagement and social exclusion' (Dutton et al. 2007: 31). For a critical account of the cyber-enthusiasts' position, see May (2002); Robins and Webster (1999: chapters 3 and 4); and Webster (2005).
[40] Conducted in the framework of the World Internet Project research program (www.worldinternetproject.net) that in 2003 wave of sample surveys of Internet use covered twelve countries: the USA, Sweden, Britain, Italy, Germany, Spain, Hungary, Japan, South Korea, Taiwan, Macao and Singapore (Dutton et al. 2007: 31).

due to income is less in Asian countries. Although income gap is somewhat smaller for the countries with lowest use, it increases as Internet use increases – then diminishes for the highest-use countries, where the Internet begins to reach most of the public. For instance, in high use countries such as the USA and Sweden, Internet use in the highest income quartile is above 90 percent, implying that any further increase in use must come from less-affluent groups. Nonetheless, there is no evidence at present to suggest the normalization hypothesis [i.e. the hypothesis championed by cyber-optimists – T. D.] applies to the income gap even for this lowest common indicator, and the stratification hypothesis [the one suggested by cyber-pessimists – T.D.] remains a better overall fit (Dutton et al. 2007: 33).

FIGURE 2.1. Cross-national Internet use by income, *circa* 2003 (source: Dutton et al. 2007: 34)



As far as education is concerned (see Figure 2.2):

Comparisons of the level of schooling did not demonstrate the same level of persistent stratification as for income, possibly due to the wide exposure to the Internet of nearly all individuals in school, or of school age (…) [T]he gap in Internet use between individuals with the equivalent of an American high school education and those with at least Bachelor's qualification is lower in nations where Internet use is higher (Dutton et al. 2007: 34).

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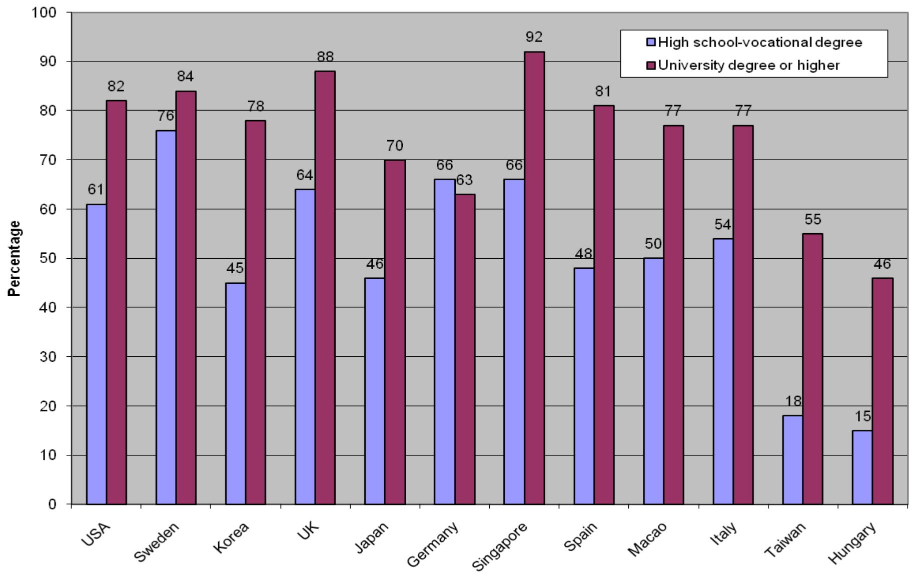
FIGURE 2.2. Cross-national Internet use by education, circa 2003 (source: Dutton et al. 2007: 36).



Internet use has also impact on the distribution of earnings. Relying on 2000 and 2001 data from the U.S. Current Population Survey (CPS)[41] DiMaggio and Bonikowski confirm (using OLS regression models in which the dependent variable is logged hourly earnings in 2001[42]) three hypotheses:

1. Between August 2000 and September 2001 the net earnings of Internet users[43] rose faster than the earnings of workers who did not use the Internet;
2. The net earnings of workers who used the Internet in 2001 but not 2000 grew faster than the earnings of nonusers but less quickly than the earnings of more experienced Internet users;
3. The net earnings of workers who used the Internet only at home or only at work grew faster than the earnings of nonusers but less quickly than earnings of workers who used the Internet at both work and home.

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[41] CPS is 'a monthly household survey fielded continually by the Bureau of the Census and based on stratified probability samples of the non-institutionalized U.S. population. Each household in the CPS is interviewed in two sequences of four consecutive months, separated by an eight-month hiatus, for a total of eight interviews over 16 months. Every month, one-eighth of the sample is replaced by new households with similar characteristics. This rotating sampling design permits comparisons of households across time, as three-quarters of respondents are the same in any two consecutive months and half of the respondents are the same after 12 months' (DiMaggio and Bonikowski 2008: 235).
[42] Control variables included logged 2000 earnings, proxy and imputed response dummies, earnings by imputation interaction, union membership, gender, race and ethnicity, age, education, marital status, metropolitan status, region, industry and occupation (DiMaggio and Bonikowski 2008: 239).
[43] The sample was divided into groups of Internet nonusers, consistent users (i.e. users both in 2000 and 2001), adopters (nonusers in 2000 who were users in 2001), and disadopters (Internet users in 2000 but not in 2001) (DiMaggio and Bonikowski 2008: 230).

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The analysis does not confirm the fourth hypothesis stating that the net earnings of workers who used the Internet in 2000 but not in 2001 grew faster than the earnings of nonusers but less quickly than the earnings of persistent Internet.

In the summary of their findings, DiMaggio and Bonikowski suggest that the unequal access to and mastery of ICTs should be taken into account in explaining individual-level outcomes more routinely by students of social stratification. It is so because, as they conclude:

> Between 2000 and 2001, U.S. workers who used the Internet increased their earnings at a faster rate than their offline counterparts. These benefits were independent of computer use, which enhanced earnings only when computers were connected to networks that enabled users to go online. Web users' earnings were higher than those of nonusers, even controlling for earnings a year earlier, and with controls for age, gender, race, ethnic background, educational attainment, marital status, region and metropolitan residence, union membership, occupational category, occupation-level job skill demands, and industry. Results indicating an advantage for workers who used the Internet in both years and for those who used the Internet at work and at home are robustly significant across a wide range of model specifications. Workers who used the Internet only at home and not at work were also rewarded, indicating that not all of the effect on earnings reflects either direct enhancements to workplace productivity or the results of employer investments. Workers who used the Internet only at work, or who began going online between 2000 and 2001, also earned more, though the effects are smaller and less robust. These results indicate the value of looking beyond workplace Internet use and suggest that human-capital/productivity enhancement may not be the only mechanism responsible for Internet users' earnings advantage. The earnings gains for workers who used the technology at home but not at work may result from several mechanisms. Some such mechanisms are plausibly connected to productivity enhancement (e.g., if home users acquire information that makes them better workers); whereas others may enhance workers' wages without necessarily benefiting employers (e.g., by giving workers superior information about available jobs or providing noisy signals for characteristics that employers value). Taking our results as a whole, we suspect that human-capital/ productivity-enhancement is probably the most important, but not the only, mechanism through which technology affects earnings (DiMaggio and Bonikowski 2008: 243).

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To sum up: computers and the Internet – as every technology, and especially as the technology facilitating the exchange of information and the communication of meaning between people – should be considered as ‘a specific layer of social structure’ (Castells 2001d: 9). Having the physical access to computers and the Internet and being able to use them effectively have become important social resources. Using Bourdieu’s (1986) terminology, possession, skills, and usage patterns of digital ICTs are nowadays a relevant share in the stock of one’s cultural capital. The exclusion from, or the incomplete participation in, the computer-based communication networks negatively affects one’s market position – and thus, following the Weberian tradition, one’s class position. The existing research shows that – despite the early hopes of cyber-optimists – access to and usage of the Internet are still unequally distributed, even in the context of advanced societies. These facts seem to support the notion that the conducting of further research on the broadly understood access to the ICTs is needed. Moreover, because previous research on digital inequality rarely defined respondents’ social origin in categories of class (usually, either income or level of education were used as proxies of one’s social background); and, at the same time, because the usefulness of social class as an analytical category has recently been debated in sociology – it would, in my opinion, contribute to the development of both sub-fields (i.e. the digital inequality studies and social stratification/ class analysis) if a comparative research merging these two traditions was carried out. Reasons for focusing on the youth in such an investigation are given in the following section.

2.7. Adolescents as a category of concern in the digital inequality research

It is often assumed that – at least in the context of advanced societies – adolescents are a social category best prepared to meet the challenges connected with the diffusion of digital technologies into an ever-increasing number of spheres of social life. In this section I report research findings that question this assumption of adolescents’ homogeneity with respect to their access to and use of computers and the Internet. These results suggest that even within rich and developed societies the adolescents’ socio-economic background still exerts its influence – although not any longer on the (basic) physical access to ICTs, but rather on its quality (the possession of a personal computer and/ or the Internet connection in

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one's own room) and on the level of one's digital skills.[44] Additionally, one of the studies reported below suggests that Internet use might have a positive effect on the reading skills of teenagers coming from low-income families.

Jackson et al. (2006) report findings from a longitudinal field study they conducted between December 2000 and April 2002 among 140 children from low-income families living in a midsize urban community in the Midwestern United States. Children were primarily African American (83%), primarily boys (58%), and primarily living in single-parent households (75%) in which the median annual income was $15,000 or less. Average age was 13.8 years (standard deviation = 1.95), median age was 13 years, and modal age was 12 years. Ages ranged from 10 to 18 years, although nearly three-quarters of participants (71%) were 12 to 14 years old. Participants were recruited at meetings held at the children's middle school and at the local Black Child and Family Institute. Requirements for participation were that the child be eligible for the federally subsidized school lunch program, that the family has a working telephone line for the previous six months, and that the family never had home Internet access. Participants agreed to have their Internet use automatically and continuously recorded, to complete surveys at multiple points during the project, and to participate in home visits. In exchange, the households received home computers, Internet access, and in-home technical support during the Internet recording period (i.e., 16 months).

Researchers took into consideration four measures of Internet use (that were automatically and continuously recorded for 16 months for each participant): time spent online (minutes per day), number of sessions (logins per day), number of domains visited (per day), and number of e-mails sent (per day). To assess reading and mathematics achievement, participants' grade point averages (GPAs) and scores on the Michigan Educational Assessment Program (MEAP) tests of these subjects were obtained directly from the local school district. GPAs were obtained for Fall 2000 (the semester before the project began), Spring 2001 (after 6 months of project participation), Fall 2001 (after 1 year of project participation), and Spring 2002 (the semester the project ended). MEAP scores were obtained for 2001 (for tests taken after 5 months of project participation) and 2002 (for tests taken 1 moth after the 16-month project ended). To evaluate time-related changes in Internet use and academic performance, latent linear growth curve analysis was used.

The analyses conducted lead Jackson et al. to formulating the following results:

[44] It is noteworthy that this reported shift in the inequality from material to skills access conforms with the prediction on that subject by van Dijk (2005: 21).

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> The Internet use during the first 6 months of the project predicted reading comprehension and total reading scores obtained at the end of that time period (i.e., Spring 2001). More time online was associated with higher reading comprehension and total reading scores. Similarly, Internet use during the last semester of the project (Time 5) predicted reading comprehension and total reading scores obtained at the end of that semester (ie., Spring 2002). More Internet sessions were associated with higher reading scores. Mathematics scores could not be predicted from Internet use, regardless of which time period and which measure of Internet use was considered. (…) Children who used the Internet more had higher GPAs after 1 year and higher scores on standardized tests of reading achievement after 6 months than did children who use it less. Moreover, the benefits of Internet use on academic performance continued throughout the project period. Children who used the Internet more during the last 4 months of the project had higher GPAs and standardized test scores in reading than did children who used it less. Internet use had no effect on standardized test scores of math achievement (Jackson et al. 2006: 432-433).

Researchers attribute such outcomes to the fact that participants who were searching the Internet more were reading more, and that more time spent reading may account for improved performance on standardized tests of reading and for higher GPAs, which depend heavily on reading skills. Because the Internet websites typically do not engage mathematics skills, the absence of Internet use effects on mathematics performance is also understandable. The generalizability of the findings is limited because of the small sample size; because of the fact that participants were performing well below average in school, as measured by both GPAs and standardized test scores; and because of the possible self-selection bias (families who agreed to take part in the study might have differed from families which did not participate in it). However, the reported results nevertheless might suggest that 'children most likely to benefit from home Internet access – poor children whose academic performance is below average – are the very children least likely to have home Internet access' (Jakcson et al. 2006: 434) in the context of a well developed Western society.

That digital inequality persists among adolescents is suggested also by case studies conducted in the United Kingdom. A survey[45] and a small number of in-depth interviews on

[45] In which 398 randomly selected pupils and students aged 13-19 years-old took part. Number of male respondents – 197.

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the Internet access and use conducted between 2000 and 2001 in four schools[46] in the Brighton and Hove area revealed that:

> the class membership was a strong determinant of digital inequality. The most visible inequality of digital opportunity both at home and at school could be found at the level of institutional provision and support, as well as when comparing home access by socio-economic group. Out-of-class availability was markedly better in the independent schools which provided open access IT rooms. Students at the comprehensive school in contrast often had few opportunities outside their weekly IT lessons to access the internet, and these students also had much lower levels of home access. Overall (…) poorer households (most of them at the comprehensive school) were far less likely to have home access (Lee 2008: 146).

As authors of another study put it: 'The notion that all adolescents in rich Western countries are technologically advanced ''cyberkids'' is not warranted' (Peter and Valkenburg 2006: 294). They argue that the existing research on phenomena connected with digital inequality have so far been predominantly focused on adults, thus ignoring adolescents – who, in the context of affluent and technologically advanced societies, were perceived as a homogenous, 'digitally native' social category, i.e. as the segment of society that is already – almost 'by definition' – well-prepared for meeting the challenges of living in a world increasingly dominated by the ICTs. In other words, as long as the talk was of different aspects of digital inequality, the adolescents – so to speak – 'by default' were considered as a coherent, 'digitally privileged' social category that is already living in the 'Information Society.' The adolescents in affluent societies were considered to be on the right side of digital divide.[47]

However, as Peter and Valkenburg's own study (based on the analysis of an online survey conducted in March and April 2005 among 749 Dutch adolescents[48] aged 13-18 years old) reveals:

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[46] The schools selected consisted of one comprehensive secondary school, serving two council estates on the edge of the city, one private girls' school, renowned for attracting an international elite, one co-educational private school, which due to having been until recently a boys-only school still has a disproportionate number of male pupils, many of whose parents live within a 50-mile radius of the school, and one sixth form college lying in the city centre, which attracts students from the city itself and neighbouring towns and villages (Lee 2008: 144).

[47] Only gender received some attention as the factor that might contribute to the creation and reproduction of the digital inequality within the social category of adolescents.

[48] Who all had regular access to the Internet.

1. Adolescents' use of the Internet as an information medium[49] was influenced by their socio-economic and cognitive resources. Adolescents' with greater socio-economic resources[50] (i.e., adolescents who have parents with better jobs and higher education) tended to use the Internet more frequently as an information medium than adolescents with fewer socioeconomic resources. Adolescents' with higher cognitive resources[51] (i.e., adolescents who were older and those with a higher formal education) also tended to look more frequently for information online than their peers with lower cognitive resources. Adolescents' cultural resources[52] were unrelated to the use of the Internet as an information medium;
2. Adolescents' use of the Internet as a social medium[53] was influenced by their socio-economic and cognitive resources as well. Adolescents with greater socio-economic resources were more likely to use the Internet as a social medium than adolescents with fewer socio-economic resources. Adolescents with fewer cognitive resources were more likely to communicate online than adolescents with greater cognitive resources, although this pattern only held for formal education, and not for age. Adolescents' cultural resources were, in turn, unrelated to the use of the Internet as social medium;
3. Adolescents' socio-economic resources affected their use of the Internet as an entertainment medium.[54] Adolescents' with fewer socio-economic resources were more likely to play online games than adolescents with greater socio-economic resources; adolescents with lower cognitive resources played online games more frequently than their counterparts with higher cognitive resources. Finally, cultural resources in terms of a negative gender effect influenced adolescents' use of the

[49] Use of the Internet as an information medium was operationalized with the question: 'How often do you look for specific information on the Internet?' There were three response categories: 1 (never), 2 (sometimes), and 3 (often).

[50] Adolescents' socio-economic resources were operationalized as a combination of two measures: the profession and the educational level of the family's primary breadwinner. The two measures were combined so that a 5-point scale resulted. On this scale, 1 meant low socio-economic resources and 5 meant high socio-economic resources.

[51] Adolescents' cognitive resources were tapped with two measures: first, their age and second, their formal education. The measurement of age was straightforward (M = 15.51, S.D. = 1.70). Education was measured on a 5-point scale that represented the different educational levels in the Netherlands (M = 2.75, S.D. = 1.22).

[52] Adolescents' cultural resources were tapped with two measures: their gender and their ethnicity. Male adolescents' were coded with 0 (48%), female adolescents were coded with 1 (52%). Respondents' ethnicity was operationalized as a dichotomy where 0 meant Non-Dutch (8%), and 1 meant Dutch (92%).

[53] Use of the Internet as a social medium was measured with the question: 'How often do you chat on the Internet?' There were three response categories: 1 (never), 2 (sometimes), and 3 (often).

[54] To measure adolescents' use of the Internet as an entertainment medium the respondents were asked: 'How often do you play games online?' There were three response categories: 1 (never), 2 (sometimes), and 3 (often).

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Internet as an entertainment medium: boys played online games more frequently than girls.

Summarizing their findings, Peter and Valkenburg emphasize the persistence of digital inequality among the adolescents living in a rich, fairly egalitarian, and technologically advanced Western society:

> The impact of socio-economic and cognitive resources on internet use is remarkable because *the age group we studied – adolescents – may be expected to be less prone to the influence of social inequality than other age groups*. Recent data indicate that, in the Netherlands and the USA, the internet access gap among adolescents has become very small (Lenhart et al., 2005; Roskamp, 2005; Sociaal en Cultureel Planbureau, 2005). Moreover, adolescents use the internet with extensive skills (Lenhart et al., 2005; Peter et al., 2005). *However, there is little evidence in our study that the vision of supporters of the disappearing digital divide approach has become reality*. Although there were clearly no internet access gaps in our sample, internet use has not become the natural force that harmonizes societal groups and empowers the powerless. On the contrary, *even among young members of the fairly egalitarian Dutch society, unequal access to socio-economic and cognitive resources led to differential uses of the internet.* The socially structured digital differentiation of adolescents' internet use does not differ much from the socially structured differentiation of adolescents' use of traditional media (e.g., Francis and Gibson, 1993; Roberts et al., 2005). *Adolescents' internet use thus does not transcend the boundaries of social inequality. Digital technology may indeed add a new quality to life. Yet* – in contrast to what the disappearing digital divide approach contends – *it is not a natural, but a socially determined force* (italics added – T.D.) (Peter and Valkenburg 2006: 302).

Another U.S. study, conducted by Hargittai (2007) between February and March 2006 among 1160 first-year students of the University of Illinois in Chicago[55] (91.3 percent aged 18 or 19 years old, 59.9 percent women) found that the self-perceived Internet familiarity is positively correlated, at a statistically significant level, with parental education and performance on the college entrance exam, as measured by the American College Testing score. 98 percent of the sample owned a personal computer (laptop or desktop or both), 95.2

[55] 'Participating students were all enrolled in the one required class on campus: the First-Year Writing Program. Given that this course is required of all students, surveying this group poses no selection bias concerning the university's student population' (Hargittai 2007: 129).

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percent had a high-speed connection at their regular Internet access location, 83.7 percent went online more than once a day, and over two-thirds (67 percent) used the Internet for at least six previous years. To measure different types of familiarity with the Internet, Hargittai constructed two indexes: the first one based on participants' knowledge of terms about basic Internet use (that was intended to measure a more general type of familiarity with the Internet); and the second one based on students' knowledge of terms concerning more recent Web developments (that was intended as the measure of a higher-level understanding of the Internet-related issues). The value of the first index ranged from 9 to 48 (with a mean at 32 and 75 percent of respondents scoring a 26 or above); the value of the second index ranged from 14 to 70 (with a mean of 28 and more than 75 percent of respondents getting less than half of the maximum score). Cronbach's alpha for the first construct was 0.88, and 0.91 for the second. In the summary of her study, the author concludes that:

> students with lower reported grades, with lower reported college entrance exam scores and with lower parental educational backgrounds indicated lower levels of understanding even regarding the understanding of very basic Internet terms. This suggest that even at the level of basic Internet use, a one hundred percent wired group is not on the same footing when it comes to basic know-how. (…) Similarly, (…) [s]tudents whose parents have higher educational degrees and students who score higher on the ACT exam report a higher level of familiarity with recent Web developments. (…) [T]hese findings again suggest a better position with respect to the Internet for those who are already more privileged (Hargittai 2007: 131).

Results from the 2007 edition of the so-called JIM study [Jugend, Information, (Multi-) Media] are based on the telephone survey conducted in June and July 2007 among the representative, randomly-selected sample of 1204 German adolescents aged 12 to 19 (JIM 2007). Personal computers (or laptops) and Internet connections are present in almost all German households in which teenagers live. As regards the physical access to computers and the Internet, in today's Germany inequalities among adolescents moved to a higher level. When it comes to the possession of a personal computer (or laptop) and the Internet connection in one's own room, there is still a nine percentage-points difference in favor of boys (Figure 2.3) and even greater differences according to the type of school currently attended or already finished by a respondent (Figure 2.4). Similar educational inequalities are reported in another German study, conducted among the representative, randomly-selected

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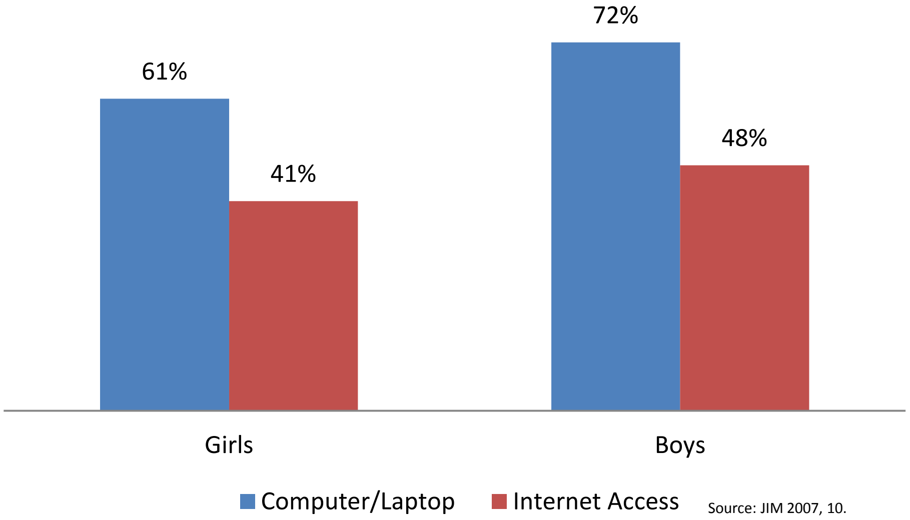
sample of 1024 young people aged 14 to 23. Also in the case of this phone survey, its authors conclude that:

> Je höher der erreichte Bildungsabschluss, je höher der besuchte Schultyp unter den Befragten SchülerInnen und je höher der erreichte Schulabschluss bei denjenigen, die die Schule abgeschlosen haben, desto häufger wird das Internet genutzt. Darüber hinaus findet sich ein deutlicher Hinweis auf die Theorie der Sozialen Vererbung (Esping-Andersen 2003): Je höher der Bildungshintergrund der Eltern der befragten Jugendlichen ist, desto häufiger nutzen die Befragten das Internet (Iske et al. 2007: 74). [Among the students taking part in the survey, the higher the level of education they have achieved yet, the higher the type of school they plan to attend later on. Similarly, among the respondents who have already finished their education, the higher the level of education achieved, the more frequent the Internet usage. Moreover, one finds a clear example of Esping-Andersen's theory of social inheritance (Esping-Andersen 2003) in action: among the students surveyed, the higher the educational background of the respondents' parents, the more frequent the Internet usage. Note: translation mine – T.D.]

Figure 2.3. ICT Youth Possession, by Gender (Germany, 2007)



Source: JIM 2007, 10.

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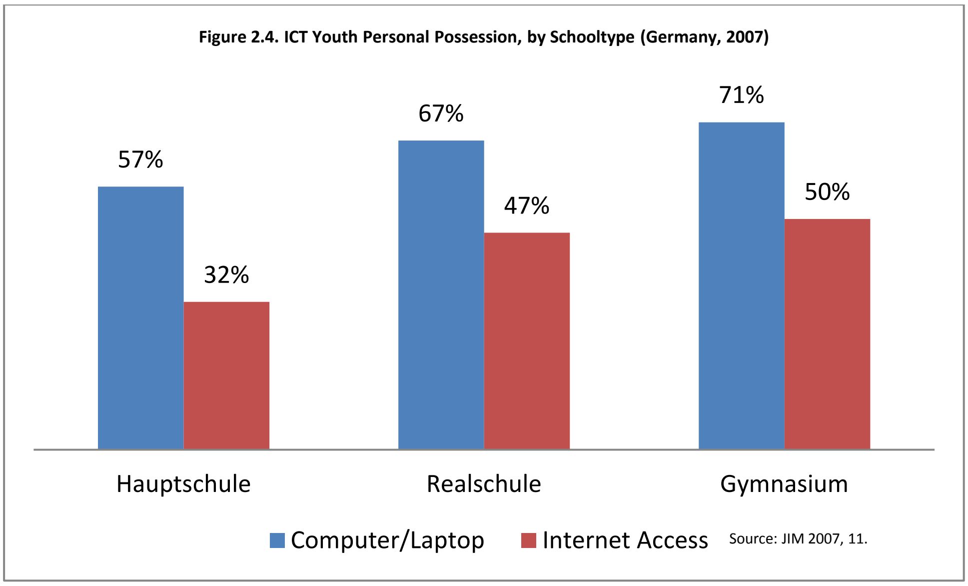

Finally, to present some international comparison, Figure 2.5 shows the percentage of EU-living parents who reported that their child (under 17 years of age) uses the Internet either at home or at school. Home was the most common place of use in nearly all of the 'old' EU Member States. The clear exceptions were the United Kingdom, Portugal, and to a lesser extent Greece. In turn, school was the most frequently mentioned location in most of the new EU Member States – with the exception of Slovenia and Estonia. In Austria, Ireland and Cyprus the two locations were used by approximately the same proportion of children. However, the report makes a caveat that – because in previous surveys, in which both parents and children were interviewed, parents' belief about their children's Internet use turned out to be lower than the use reported by children themselves – one must expect that the actual Internet penetration rate among children is significantly higher (Eurostat 2006: 13).

Research findings presented above point out that – contrary to commonly held assumptions – adolescents living in advanced societies are not a homogenous social category when it comes to the physical access, skills, and usage patterns of computers and the Internet. Thus, the new, important resource seems to be unequally distributed also among those supposed to take the full advantage of its development. Socio-economic factors, one's own or parental level of education, and gender affect the access to ICTs, the quality of that access, and the ability to use digital technologies. There are also substantial differences between developed countries as regards adolescents' access to ICTs. However, the limited nature of data limits the generalizability of the findings and suggests the need for further, comparative research on digital inequality among adolescents living in advanced societies.

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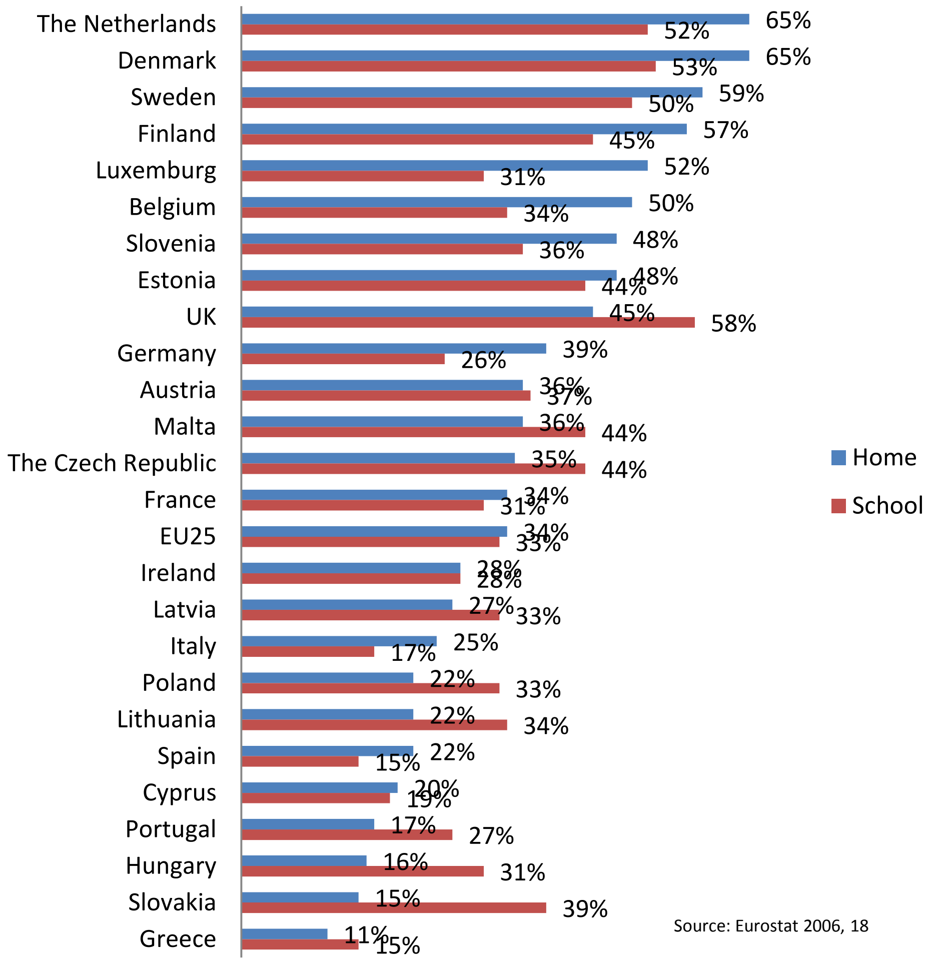
Figure 2.5. Percentage of Parents Declaring That A Child Uses Internet at Home and at School



Source: Eurostat 2006, 18

2.8. Summary

The chapter provided arguments for combing class analysis with an adolescents-centred, comparative, quantitative digital inequality research.

Although the concept of social class – either in its Marxian or Weberian variant, or in the mixture of both – retained a ‘master term’ status throughout much of the XXth century sociology; it has nevertheless received – especially recently – a widespread critique. The critics of class analysis point out that – because of the nature of socio-economic changes through which the most developed societies on the planet are currently coming – the new rise social inequality does follow old class lines, but is more individualized, or applies to such (ascripted or achieved) status categories as gender, ethnic/racial minority membership or one’s level of education, etc. On the other hand, the question whether categories of class

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analysis should altogether be discarded from sociological research, or whether (after necessary adjustments) they can still serve as an useful tool in explaining patterns of contemporary social inequality – remains an open, empirical question. Therefore, the chapter made a case for conducting a comparative research project that would analyze the new, important social phenomenon (so-called digital inequality, as multidimensionally defined by van Dijk) among adolescents – who so far seem to be marginalized in most of the digital inequality studies because of their presupposedly 'digital native' status – precisely with a help of Erikson-Goldthorpe class scheme that is widely used in the comparative social research on inequality. Thus, by such a design of the study, I hope to contribute to the development of two sub-fields within the social research.

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3. Social Class and Digital Inequality in Physical, Skills, and Usage Access to the Internet among Adolescents in 39 Countries

3.1. Introduction

This chapter investigates a specific case of class reproduction. It studies whether social class background of adolescents living in 39 countries determines their life chances, understood here as access to computers and the Internet. The chapter argues, following recent contributions by Castells (2009) and van Dijk (2005), that having such an access is a source of major advantage in the contemporary world. In fact, given the growing importance of ICTs in education and in the labor market, such aspects of access as skills or usage patterns can be construed as new forms of what Bourdieu (1987) calls "cultural capital." It is therefore interesting to look whether the "old" social class inequalities in the parents' generation are being reproduced with respect to the "new" digital inequalities in the children's generation. So far class analysis seldom has been used as a theoretical framework for studies of digital inequality. In such studies social background is usually conceptualized as an income or a socio-economic status (SES). The present chapter contributes to class analysis and digital inequality studies by merging these two streams of research.

The existing research shows that even within developed societies the access to ICTs remains unequally distributed (van Dijk 2009). This unequal distribution is also found among adolescents, a group supposed to be the first 'digitally native' generation (Tapscott 1998). Most of the literature focusing on youth, however, has so far been limited to case-studies (Hargittai 2007; Lee 2008), single-country research (Iske et al. 2007; JIM 2007; Livingstone 2002; Livingstone and Helsper 2007; Peter and Valkenburg 2006), or comparisons of European countries only (Basl 2007; Livingstone and Bovill 2001; Livingstone and Haddon 2009). The only exception found at the time of writing of the present chapter is the recent investigation of 30 countries, in which Notten et al. (2009), using hierarchical linear modeling, analyzed data from the 2003 wave of the PISA study. The current chapter addresses this shortage of comparative, quantitative research on the inequality of access to ICTs among adolescents.

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The chapter is organized as follows. The second section introduces the notion of digital inequality and presents the research question, while section three formulates hypotheses. Section four describes data used in the analysis and procedures implemented during investigation. Section five deals with testing research hypotheses. The last section concludes the analysis undertaken and answers the chapter's research question.

3.2. Theoretical considerations and the research question

The argument that the Internet is not yet another technological gadget, but the innovation of significant social consequences, relies on Castells's seminal contribution to the recent debate on social transformation and the role that computer-mediated information and communication networks play in this transformation (Castells 2000; 2001a; 2001b; 2001c; 2001d; 2004). Following the American historian of technology Claude S. Fischer (1992: 1-32), Castells points out that the technology, understood as material culture, is one of the fundamental dimensions of social structure and social change. According to him, it was the gradual development and diffusion of – as he calls them – 'microelectronics-based information technologies' that largely contributed to creating a basis, indeed: an infra-structure, for the new type of social structure: the network society.

Although in Castells's view neither inclusion in nor exclusion from the full and meaningful participation in the network society cannot be reduced to using computers and the Internet; nevertheless, the lack of physical access and inability (or limited ability) to use these digital technologies – could serve as good indicators of 'deeper structural subordination and irrelevance' (Castells 2004: 24). This is so, because 'Core economic, social, political, and cultural activities throughout the planet are being structured by and around the Internet, and other computer networks. In fact, *exclusion from these networks is one of the most damaging forms of exclusion in our economy and in our culture*' (italics added – T.D.) (Castells 2001d: 3).

Van Dijk, another proponent of the theory of the network society, sees also the possibility of an inegalitarian development scenario of the new social structure. He writes that increasingly, the participation in all important fields of society (such as labor market and business, education, social relations, public and private space, culture, politics, and the official institutions of society – i.e. citizenship with entitlements) will depend, at least partly,

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on the type and level of access to the new digital media. As regards the education, he notes that more and more

> access to computers and the Internet will be necessary to achieve specific training. (…) Within 10 years, computers and the Internet will have become indispensable in education throughout the developed world. (…) The inescapable result is that *people who do not have physical access will be excluded from an increasing number of educational opportunities. Children in families lacking access are strongly disadvantaged compared to children who have computers and Internet connections at home.* Access to computers and the Internet at school is only available during particular hours and for a limited number of children. Even in the developed countries, it is fairly common, even in 2005, that only one computer is available for every 10 to 20 pupils. Those who have the means at home are learning to work with computers much earlier, longer, and faster, even before they reach school years (italics added – T.D.) (van Dijk 2005: 167; 170).

To sum up, both Castells and van Dijk claim that as computer-mediated communication networks increasingly permeate new spheres of social life – thus becoming an indispensable part of the civilizational curriculum – having the physical access to them and being able to use them effectively become conditions sine qua non for the full participation in the contemporary society. However, and in this point both authors agree too, both of these resources are distributed unequally – also within the context of advanced societies. Thus, broadly understood access to ICTs retains its structurizing power, also in the developed world.

"Broadly understood access to ICTs" is for the purpose of this chapter defined following van Dijk's distinction of the four kinds of access to digital technologies that correspond to the four types of digital inequality (van Dijk 2005: 20): 1. Motivational or psychological (motivation to use digital technologies, fear – or a lack thereof – of using them); 2. Material or physical (possession of computers and Internet connections or permission to use them and their contents); 3. Skills (possession of digital skills, i.e.: the ability to operate hardware and software, the ability to search for information using them, and the ability to use information retrieved in this way for improving one's position in society); 4. Usage (number and diversity of computer applications used, usage time etc.). This multidimensional definition of digital access and digital inequality is used in this chapter as a theoretical framework for the analysis, although psychological access is not studied because the empirical basis of the investigation does not contain questions relating to it.

The limitations of the literature on the youth access to computers and the Internet mentioned in the introduction to this chapter and the importance of ICTs in shaping structures

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of opportunity in the contemporary world make it worthwhile to investigate the relation between the social class of the adolescents' families of origin (the independent variable), and adolescents' access to ICTs (the dependent variable). More specifically, the research question asked in this chapter reads as follows: 'Do adolescents coming from working class families lag behind their peers coming from service class families with respect to access to computers and the Internet?'

3.3. Research hypotheses

To operationalize the independent variable, the Erikson-Goldthorpe seven-class scheme (Erikson and Goldthorpe 1992: 38-39) is used. It has become standard in comparative inequality research. The analysis reported in this chapter focuses on the comparison of two classes relevant in society: on the one hand, service class and on the other hand, working class.

To answer the research question, the following research hypotheses are examined:

Hypothesis 1: In all countries under study, service class children have a higher probability of having the Internet access at home than working class children.

Hypothesis 2: In all countries under study, service class children have higher levels of confidence in doing ICT tasks than working class children.

The hypotheses referring to inequality in digital usage access are formulated to investigate whether the results obtained by Peter and Valkenburg (2006) in the Dutch context would also hold cross-nationally. In their already mentioned study (see chapter 1), Peter and Valkenburg find that Dutch adolescents' with greater socio-economic resources (i.e., adolescents who have parents with better jobs and higher education) tend to use the Internet more frequently as an information medium than adolescents with fewer socioeconomic resources. As the similar results can be expected with regard to educational usage of computers and the Internet, the third hypothesis reads:

Hypothesis 3: In all countries under study, service class children use computers and the Internet more often than working class children for educational purposes.

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The same study by Peter and Valkenburg also finds that Dutch adolescents with greater socio-economic resources are more likely to use the Internet as a social medium than adolescents with fewer socio-economic resources. Thus, the fourth hypothesis runs as follows.

Hypothesis 4: In all countries under study, service class children use computers and the Internet more often than working class children for communicational purposes.

Finally, Peter and Valkenburg's study finds that Dutch adolescents' with fewer socio-economic resources are more likely to play online games than their peers with greater socio-economic resources. Therefore, the fifth hypothesis reads as follows.

Hypothesis 5: In all countries under study, working class children use computers and the Internet more often than service class children for entertainment purposes.

3.4. Data and Models Used in the Analysis

The Internet penetration rates among the general population used in the paper refer to 2006 and are taken from the 2008 OECD Factbook (OECD 2008: 25), with the exception of Australia – for which data are taken from the official press release of the Australian Bureau of Statistics (ABS 2008); Macao, for which data are taken from Cheong (2008: 3); Bulgaria, Croatia, Latvia, Lithuania, and Slovenia, for which data are taken from Eurostat (2011), and Chile, Colombia, Jordan, Qatar, Serbia, Thailand, and Uruguay, for which data are taken from International Telecommunications Union (2011).

Data concerning the dependent variable and independent variables are drawn from the 2006 PISA project. Details about the methodology underlying the PISA 2006 survey, as well as a comprehensive description of the OECD PISA 2006 international database are to be found in OECD (2009a; 2009b). As a part of the survey, an ICTs Familiarity Questionnaire – containing questions relevant for the study of the physical, skills, and usage aspects of access to computers and the Internet among fifteen year-olds – was conducted in 40 countries. The analyses reported here include 39 of the 40 countries that administered the ICTs Familiarity Questionnaire in the framework of their 2006 PISA survey, namely: Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark,

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Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Korea, Latvia, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, the Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, and Uruguay. Because of the small sample size Lichtenstein – another country that administered the ICTs Familiarity Questionnaire in 2006 – is not reported in the analyses that follow.

Overall, five models are fitted in the analysis. To investigate the first hypothesis, the following multiple logistic regression is fitted:

$$Y = \alpha + \beta X + \gamma Z + \eta V + \theta W + \varepsilon, (1)$$

where the dependent variable Y – physical access to the Internet at home – is operationalized as a dummy variable coded zero if the respondent does not report having the Internet connection at home and coded one if the respondent has the Internet connection at home. The focus on home possession is motivated by the fact that this kind of ownership ensures the broadest possible range of the users' autonomy while using technology, and hence allows them to derive the greatest benefits that the technology can provide (DiMaggio et al. 2004: 377). On the right-hand side of equation (1), α is the intercept (constant), while X and Z are the Erikson-Goldthorpe social class to which, respectively, the respondent's father and mother belong. The measure of occupational class is the Erikson-Goldthorpe schema (Erikson and Goldthorpe 1992: 38-39) comprising service workers (service class), routine nonmanuals, petty bourgeoisie, skilled craft workers, unskilled manual workers, farmers, and agricultural workers. The ISCO-88 occupational codes are recorded to the Erikson-Goldthorpe schema according to the procedure detailed by Ganzeboom and Treiman (1996). Recoding reveals that there are no occupations corresponding to petty bourgeoisie in the dataset, hence this social class is dropped from the analysis reported in this paper.[56] The

[56] Admittedly, no coding for petty bourgeoisie is a major problem in the countries with large proportions of self-employed, like e.g. Italy or Greece. However, the recoding of ISCO-88 occupational codes into Erikson-Goldthorpe class scheme does not provide the space for petty bourgeoisie. It's ommittance is simply a feature, not a bug, in Ganzeboom and Treiman (1996) paper (see in it: Table 1, page 214, Table 3, page 219, and especially Appendix A on pages 221-237). It is not, however, that petty bourgeoisie occupations completely vanish from Ganzeboom and Treiman's recoding (and hence from the analysis reported in this chapter). Thus, i.e., 'Watch Makers' (ISCO-88 code: 7311) or 'Goldsmiths and Diamond Cutters' (ISCO-88 code: 7313) are subsumed under skilled manual workers (class VI from Erikson and Goldthorpe 1992: 38-39). Admittedly, a social situation of a rich goldsmith who is the owner of the artisan shop is qualitatively different from a social situation of an 'Electrical Line Installer and Repairer' (ISCO-88 code: 7245) who is being subcontracted from the temp job agency to work for the big electrical company, but for the purpose of the analysis reported in this

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Erikson-Goldthorpe classification used in the analysis is applied to fathers' and mothers' social class membership alike. There are also two dummy variables indicating respondents who report that either their father or their mother is a home-maker (housewife), a student, or a social beneficiary, as well as those respondents who do not know either their father's or their mother's occupation, who describe their father's or their mother's occupation vaguely (e.g., a good job, a quiet job, a well paid job), and those missing on their father's or their mother's occupational variable. Another modification of the original Erikson-Goldthorpe scheme is the merger of two social classes, that is skilled craft workers and unskilled manual workers, into one class, referred to in this chapter as working class. The merger is primarily driven by the fact that the class of unskilled manual workers is sparsely populated in many countries under study. In all the five models reported in this chapter, father's and mother's working class membership is a reference category. The reason for controlling for both parents' socio-economic background is the result of following Korupp et al.'s (2002) recommendation based on their analysis of children's educational success. These authors conclude that within the family, the resources of the lower status parent are important for the educational attainment of children and that if the status of the mother and the father differ, children are not unequivocally pulled towards the higher status parent's platform, but range somewhere between them (Korupp et al. 2002: 37). Information on the father's occupation is elicited by two questions asking respondents about their father's main job and what he does in his main job while information on the mother's occupation is elicited by two questions asking respondents about their mother's main job and what she does in her main job. It is worth mentioning that students younger than fifteen years of age have been shown to accurately provide their parents' occupation (West et al., 2001). The information on both father's and mother's occupation is coded according to the International Standard Classification of Occupation 1988 (ISCO-88).

As control variables, V and W are specified in the model as well: V being a dummy for gender, coded one for a girl and zero for a boy; and W being the respondent's migration background measured as a dummy variable coded one if the respondent is an indigenous in a given country and coded zero if the respondent is the first- or second-generation immigrant. The error term is specified as ε.

Because in hypotheses 2-5 the dependent variable is operationalized as an ordinal one, which violates the first assumption of the classical linear regression model according to

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chapter both of these occupational categories are grouped in the same class following the recoding procedure established and published by two leading scholars in the field.

which the dependent variable can be calculated as a linear function of a specific set of independent variables and a disturbance term (Kennedy 2008: 41), the data are analyzed using the logit version of the ordinal regression model (ORM) (Long 1997; Long and Freese 2003) introduced by McKelvey and Zavoina (1975) and McCullagh (1980) who referred to it as the proportional odds model.

To investigate the second hypothesis, the following model is fitted:

$$Y = \alpha + \beta X + \gamma Z + \eta V + \theta W + \varepsilon, (2)$$

where the dependent variable Y is operationalized as the index measuring respondents' self-reported confidence in doing ICT high-level tasks (HIGHCONF) constructed out of eight items: 1. The respondent's confidence in being able to use software to find and get rid of computer viruses; 2. The respondent's confidence in being able to edit digital photographs or other graphic images; 3. The respondent's confidence in being able to create a database; 4. The respondent's confidence in being able to use a word processor; 5. The respondent's confidence in being able to use a spreadsheet to plot a graph; 6. The respondent's confidence in being able to create a PowerPoint presentation; 7. The respondent's confidence in being able to create a multi-media presentation (with sound, pictures, video); 8. The respondent's confidence in being able to construct a web page. For all items, the reversed answer scale ranges from 1 ('I don't know what this means'), to 2 ('I know what this means but I cannot do it'), to 3 ('I can do this with help from someone'), to 4 ('I can do this very well by myself'). The four-point scale is also applied for the overall index, with 1 corresponding to 'No confidence', 2 corresponding to 'Low confidence', 3 corresponding to 'Moderate confidence', and 4 corresponding to 'High confidence'. The consistency analysis performed on the eight items constituting the HIGHCONF index reveals that they can form a single scale. The lowest value of Cronbach's alpha is reported for the Netherlands ($\alpha_C = 0.76$). With respect to the symbols on the right-hand side of equation (2), they are all defined in the same way as the symbols in equation (1).

To examine the third research hypothesis, the following model is fitted:

$$Y = \alpha + \beta X + \gamma Z + \eta V + \theta W + \varepsilon, (3)$$

where the dependent variable Y is operationalized as the index of ICT/Internet educational use constructed out of five items: 1. The respondent's frequency of using computers to write

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documents (e.g. with Microsoft Word or WordPerfect); 2. The respondent's frequency of using computers and the Internet to collaborate with a group or team; 3. The respondent's frequency of using spreadsheets (e.g., Microsoft Excel or Lotus); 4. The respondent's frequency of using graphics programs for drawing or painting; 5. The respondent's frequency of using educational software (such as Mathematics programs). For all items, the reversed answer scale ranges from 1 (= 'Never'), to 2 (= 'Less than once a month'), to 3 (= 'Between once a week and once a month'), to 4 (= 'A few times each week'), to 5 (= 'Almost every day'). The same scale is applied for the overall index. The consistency analysis performed on the above-mentioned five items reveals that they can form a single scale. The lowest value of Cronbach's alpha is recorded for Austria at 0.68 and Australia at 0.69, while in all the other countries under study the value of Cronbach's alpha is greater than 0.70 or 0.80. With respect to the symbols on the right-hand side of equation (3), they are all defined in the same way as the symbols in equation (1).

To examine the fourth research hypothesis, the following model is fitted:

$$Y = \alpha + \beta X + \gamma Z + \eta V + \theta W + \varepsilon, \quad (4)$$

where the dependent variable Y is operationalized as the respondent's answers to the question: 'How often do you use computers for communication (e.g., e-mail or 'chat rooms')?' The answers are recorded on the same reversed scale that was used for the items constituting the index of ICT/Internet educational use. All the symbols on the right-hand side of equation (4) are defined as the symbols in equation (1).

Finally, to examine the fifth research hypothesis, the following model is fitted:

$$Y = \alpha + \beta X + \gamma Z + \eta V + \theta W + \varepsilon, \quad (5)$$

where the dependent variable Y is operationalized as the index of ICT/Internet entertainment use constructed out of three items: 1. The respondent's frequency of using computers for playing games; 2. The respondent's frequency of using computers for downloading software from the Internet (including games); 3. The respondent's frequency of using computers for downloading music from the Internet. Again, the same reversed scale is applied as in the case of the index of ICT/Internet educational use. The consistency analysis performed on the above-mentioned three items reveals that they can form a single scale. The lowest value of Cronbach's alpha is recorded for the Netherlands at 0.61, with all other countries under study

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having this value greater than that. With respect to the symbols on the right-hand side of equation (5), they are all defined in the same way as the symbols in equation (1).

The analyses reported in the paper are done with Stata 12 and SPSS 18 statistical packages.

3.5. Results

My first hypothesis states that in all countries under study, service class children have a higher probability of having the Internet access at home than working class children.

Table 3.1 presents the effects that having a father belonging to service class exerts on the respondent's possession of the Internet access at home. The coefficients of class difference and standard errors reported in this table are estimations of the coefficient for the dummy variable coded as one for the respondents whose fathers belong to service class and as zero for the respondents whose fathers do not belong to service class. The positive values of the coefficient indicate that, holding control variables specified in the model constant, the respondents whose fathers belong to service class report having the Internet access at home more often than the respondents whose fathers belong to working class. The same applies to the values reported in Table 3.2 that presents the effects that having a mother belonging to service class exerts on the respondent's possession of the Internet access at home. It turns out that in only one country, Korea, having a service class father or a service class mother does not significantly affect the respondent's self-declared Internet possession at home. In all other countries under investigation, both in case of father's and mother's class membership, service class adolescents enjoy the advantage with respect to the possession of the Internet at home in comparison with working class peers.

Table 3.3 presents the size of this service class-working class advantage that is calculated by adding the average marginal effect for the dummy variable indicating the father's membership of service class to the average marginal effect for the dummy variable indicating the mother's membership of service class and dividing this sum by two. The values reported in Table 3.3 allow one to distinguish the countries where coming from service class family, as opposed to coming from working class family, increases the probability of respondent having the Internet access at home by more than 25 percent (Hungary, Portugal, and Uruguay), by more than 20 percent (Bulgaria, Chile, Croatia, the Czech Republic, Lithuania, Poland, Serbia, Slovakia, and Thailand), by more than 15 percent (Greece, Italy,

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Japan, Jordan, Latvia, Qatar, the Russian Federation, Spain, and Turkey), by more than 10 percent (Austria, Colombia, Germany, Ireland, New Zealand, and Slovenia), by more than 5 percent (Australia, Belgium, Canada, and Macao), and by less than 5 percent (Denmark, Finland, Iceland, Korea, the Netherlands, Norway, Sweden, and Switzerland).

To explain these between country differences in service class-working class advantage in physical digital access, Table 3.4 presents the results of two second-stage OLS regressions. In the first regression, the values of the coefficients that express the advantage of service class to working class for fathers are the dependent variable regressed simultaneously on three independent variables: the 2006 values of the Internet penetration rate among the general population, a country's educational expansion measured by the percentage of gross enrollment in tertiary education in 2006, which represents the general level of participation in tertiary education in a given country (UNESCO, 2008), [57] and on a country's wealth measured by the log of GDP per capita at purchasing power parity (PPP) in 2006, current international dollars ($) (Worldbank, 2010). The choice of the last two independent variables is informed by the similar analysis reported by Notten et al. (2009: 553-554). In the second regression, the values of the coefficients that express the advantage of service class to working class for mothers are the dependent variable regressed simultaneously on the same three independent variables.[58] As it turns out, only the 2006 Internet penetration rate is associated with the size of service class advantage over working class with respect to physical digital inequality: the higher the Internet penetration rate, the lower the gap between social classes, both in father's and mother's case.

My second hypothesis states that in all countries under study, service class children have higher levels of confidence in doing ICT tasks than working class children. Table 3.5 present the effects that having a service class father exerts on the respondent's self-declared confidence in doing ICT tasks. The coefficients of class difference and standard errors reported in Table 3.5 are estimations of the coefficient for the dummy variable coded as one for the respondents whose fathers belong to service class and as zero for the respondents whose fathers do not belong to service class. The positive values of the coefficient indicate that, holding control variables specified in the model constant, the respondents whose fathers

[57] Because of incomplete data about tertiary enrollment in 2006, I used data for Germany for 'the most recent year' from the NationMaster data source. See http://www.nationmaster.com/graph/edu_ter_enr-education-tertiary-enrollment. As of 01.04.2012, the figure for Germany (used in the reported calculations) stood there at 46.3%.

[58] The issue whether the estimated dependent variable used in the second stage OLS regression should be weighted using the associated standard errors is still not settled (see Lewis and Linzer 2005). In the present analysis, the weighting is not applied.

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belong to service class declare higher confidence in doing ICT tasks than the respondents whose fathers belong to working class. The same applies to the values reported in Table 3.6 that presents the effects that having a mother belonging to service class exerts on the respondent's self-declared confidence in doing ICT tasks. It turns out that in seven countires, namely in Finland, Greece, Iceland, the Netherlands, New Zealand, Norway, and Sweden having a service class father does not significantly affect the respondent's score on the index of confidence in doing ICT skills. Similarly, in ten countries, namely in Denmark, Finland, Germany, Iceland, Jordan, the Netherlands, Norway, Slovenia, Spain, and Switzerland having a service class mother does not significantly affect the respondent's score on the index of confidence in doing ICT skills.

However, the substantive differences between service class and working class with regard to digital skills access reveal their neglibility, also in case of the countries in which having a service class father or a service class mother is nonetheless statistically significant. Table 3.7 presents the size of this service class-working class advantage that is calculated by adding the average marginal effect for the dummy variable indicating the father's membership of service class to the average marginal effect for the dummy variable indicating the mother's membership of service class and dividing this sum by two. The values reported in Table 3.7 show that the highest value for service class-working class difference is recorded for Slovakia, where coming from a service class family increases the respondent's probability of having 'Low confidence' in conducting ICT tasks by 10 percent, and for Uruguay, where coming from a service class family decreases the respondent's probability of having 'Low confidence' in conducting ICT tasks by 9.63 percent.

My third hypothesis states that in all countries under study, service class children use computers and the Internet more often than working class children for educational purposes. Table 3.8 present the effects that having a service class father exerts on the respondent's score on the index of ICT/Internet educational use. The coefficients of class difference and standard errors reported in Table 3.8 are estimations of the coefficient for the dummy variable coded as one for the respondents whose fathers belong to service class and as zero for the respondents whose fathers do not belong to service class. The positive values of the coefficient indicate that, holding control variables specified in the model constant, the respondents whose fathers belong to service class score higher than the respondents whose fathers belong to working class on the index of ICT/Internet educational use. The same applies to the values reported in Table 3.9 that presents the effects that having a mother belonging to service class exerts on the respondent's score on the index of ICT/Internet

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educational use. It turns out that in 20 countries, namely in Austria, Bulgaria, Chile, Croatia, Denmark, Finland, Germany, Hungary, Ireland, Italy, Japan, Portugal, Qatar, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, and Turkey having a service class father does not significantly affect the respondent's score on the index of ICT/Internet educational use. Similarly, in 24 countries, namely in Australia, Austria, Belgium, Bulgaria, Chile, Croatia, Denmark, Finland, Germany, Greece, Iceland, Ireland, Italy, Japan, Jordan, Korea, Latvia, the Netherlands, New Zealand, Norway, Portugal, Spain, Switzerland, and Turkey having a service class mother does not significantly affect the respondent's score on the index of ICT/Internet educational use.

Again, however, the substantive differences between service class and working class with regard to educational use of ICTs reveal their neglibility, also in case of the countries in which having a service class father or a service class mother is nonetheless statistically significant. Table 3.10 presents the size of this service class-working class advantage that is calculated by adding the average marginal effect for the dummy variable indicating the father's membership of service class to the average marginal effect for the dummy variable indicating the mother's membership of service class and dividing this sum by two. The values reported in Table 3.10 show that the highest value for service class-working class difference is recorded for Uruguay, where coming from a service class family increases the respondent's probability of using ICTs for educational purposes 'A few times each week' by 4.65 percent, and for the Russian Federation, where coming from a service class family decreases the respondent's probability of not using ICTs for educational purposes at all by 6.79 percent.

My fourth hypothesis states that in all countries under study, service class children use computers and the Internet more often than working class children for communicational purposes. Table 3.11 present the effects that having a service class father exerts on the respondent's self-reported frequency of computer use for communication (e.g. using email or 'chat rooms'). The coefficients of class difference and standard errors reported in Table 3.11 are estimations of the coefficient for the dummy variable coded as one for the respondents whose fathers belong to service class and as zero for the respondents whose fathers do not belong to service class. The positive values of the coefficient indicate that, holding control variables specified in the model constant, the respondents whose fathers belong to service class use computers for communicational purposes more often than the respondents whose fathers belong to working class. The same applies to the values reported in Table 3.12 that presents the effects that having a mother belonging to service class exerts on the respondent's self-reported frequency of computer use for communication. It turns out that in five countries,

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namely in Finland, Greece, Iceland, Korea, and the Netherlands having a service class father does not significantly affect the respondent's self-reported frequency of computer use for communication. Similarly, in eight countries, namely in Belgium, Denmark, Finland, Iceland, Jordan, Korea, the Netherlands, and Switzerland having a service class mother does not significantly affect the respondent's self-reported frequency of computer use for communication.

Again, however, the substantive differences between service class and working class with regard to educational use of ICTs reveal their neglibility, also in case of the countries in which having a service class father or a service class mother is nonetheless statistically significant. Table 3.13 presents the size of this service class-working class advantage that is calculated by adding the average marginal effect for the dummy variable indicating the father's membership of service class to the average marginal effect for the dummy variable indicating the mother's membership of service class and dividing this sum by two. The values reported in Table 3.13 show that the highest value for service class-working class difference is recorded for Chile, where coming from a service class family increases the respondent's probability of using ICTs for communicational purposes 'Almost every day' by 17.51 percent, and for the Russian Federation, where coming from a service class family decreases the respondent's probability of not using ICTs for communicational purposes at all by 13.05 percent.

My fifth hypothesis states that in all countries under study, service class children use computers and the Internet more often than working class children for entertainment purposes. Table 3.14 present the effects that having a service class father exerts on the respondent's score on the index of ICT/Internet entertainment use. The coefficients of class difference and standard errors reported in Table 3.14 are estimations of the coefficient for the dummy variable coded as one for the respondents whose fathers belong to service class and as zero for the respondents whose fathers do not belong to service class. The positive values of the coefficient indicate that, holding control variables specified in the model constant, the respondents whose fathers belong to service class score higher than the respondents whose fathers belong to working class on the index of ICT/Internet entertainment use. The same applies to the values reported in Table 3.15 that presents the effects that having a mother belonging to service class exerts on the respondent's score on the index of ICT/Internet entertainment use. It turns out that in fourteen countries, namely in Australia, Austria, Denmark, Finland, Germany, Greece, Hungary, Iceland, Ireland, the Netherlands, New Zealand, Portugal, Sweden, and Switzerland having a service class father does not

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significantly affect the respondent's score on the index of ICT/Internet entertainment use. Similarly, in thirteen countries, namely in Australia, Austria, Denmark, Finland, Iceland, Ireland, Jordan, Korea, the Netherlands, New Zealand, Norway, Spain, and Sweden having a service class mother does not significantly affect the respondent's score on the index of ICT/Internet entertainment use.

Again, however, the substantive differences between service class and working class with regard to educational use of ICTs reveal their neglibility, also in case of the countries in which having a service class father or a service class mother is nonetheless statistically significant. Table 3.16 presents the size of this service class-working class advantage that is calculated by adding the average marginal effect for the dummy variable indicating the father's membership of service class to the average marginal effect for the dummy variable indicating the mother's membership of service class and dividing this sum by two. The values reported in Table 3.16 show that the highest value for service class-working class difference is recorded for Bulgaria, where coming from a service class family increases the respondent's probability of using ICTs for entertainment purposes 'Almost every day' by 5.20 percent, and for Colombia, where coming from a service class family decreases the respondent's probability of not using ICTs for entertainment purposes at all by 6.36 percent.

The analysis of missing values, reported in more detail in Appendix 1, shows that in the majority of countries under study there are more than five percent of missing values on different measures of digital access (except for the measure of physical access, where the percent of values missing on the dependent variable is higher than five in three countries only: Colombia (6.16%), Jordan (5.96%), and Qatar (7.90)). The sensitivity analysis shows that in the majority of countries under investigation, the respondents whose either father or mother is out of labor force are overrepresented among the respondents who are missing on all five measures of digital access used as the dependent variable in the analyses reported in this chapter. On the other hand, in the majority of countries under investigation, the respondents whose either father or mother belongs to one of the following social classes: routine non-manuals or service class – such respondents are underrepresented among the respondents who are missing on all five measures of digital access used as the dependent variable in the analyses reported in the present chapter. With respect to the size of the bias caused by values missing on the dependent variables, however, additional analysis (see Appendix 1, pages 190-192; and Tables A7 to A16, pages 259-267) shows that it is substantively insignificant and does not affect the results reported in this chapter.

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3.6. Conclusions

This chapter asks whether adolescents coming from working class families lag behind their peers coming from service class with respect to access to computers and the Internet. Social class is operationalized according to the Erikson-Goldthorpe class scheme. The chapter's empirical basis is that of information on the ICT possession, skills, and usage collected for 39 countries in the framework of the 2006 wave of the PISA study on fifteen year-old students. Physical access is operationalized as a dummy variable coded zero if the respondent does not report having the Internet connection at home and coded one if the respondent has the Internet connection at home. Skills access is operationalized as a score on the index measuring respondents' self-declared confidence in doing ICT high-level tasks. Usage access is operationalized as two indices: one measuring respondents' ICT/Internet educational use, the other measuring respondents' ICT/Internet entertainment use. Another operationalization of usage access is an answer to the question: 'How often do you use computers for communication (e.g., e-mail or 'chat rooms')?', recorded on the five-point categorical scale ranging from 1 = 'Never' to 5 = 'Almost every day'.

The conducted analysis reveals that service class children have a higher probability of having the Internet access at home than working class children in all countries under study except for Korea. This class advantage is not only statistically, but also substantively significant. In twelve of the 39 countries (Bulgaria, Chile, Croatia, the Czech Republic, Hungary, Lithuania, Poland, Portugal, Serbia, Slovakia, Thailand, and Uruguay) service class children enjoy more than 20 percent higher probability of having the Internet access at home than working class children. On the other hand, in such technologically advanced and fairly egalitarian societies as Denmark, Finland, Iceland, the Netherlands, Norway, Sweden, and Switzerland the advantage of service class over working class drops to below 5 percent. The second stage regression analysis shows that between-countries differences in the size of social class advantage can be explained solely by the Internet penetration rate among the general population: the more widespread physical access to the Internet among the general population, the smaller the advantage of service class adolescents over their working class peers in having access to the Internet at home. This result suggests that the inequality in physical access to the Internet among adolescents coming from different social classes is caused by the availability of technology and thus will diminish in the future. One can expect that no section of the age category under investigation is at risk of being permanently

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digitally excluded, since non-technological factors such as the level of GDP per capita are not associated with the social class differences in physical access to the Internet.

The conducted analysis also shows that other aspects of digital access among adolescents, namely skills and usage access, are already not divided along class lines. Although there are countries in which service class background is statistically significant when it comes to the respondent's scores on the indices of confidence in doing ICT skills or on the indices of different kinds of ICT use, these statistically significant differences, however, do not translate themselves into substantial class differences. The highest service class-working class difference in the probability of scoring better on the index of confidence in one's digital skills is equal to 10 percent (Uruguay), while the highest service class-working class difference in the probability of scoring better on the index of ICT educational use is equal to 6.79 percent (the Russian Federation), and the highest service class-working class difference in the probability of scoring better on the index of ICT entertainment use is equal to 6.36 percent (Columbia). Although there are a few high class differences in the probability of using computers for communication purposes (the highest being 17.51 percent advantage of service class children in using computers for communication 'A few times each week' in Chile), in the vast majority of cases service class-working class differences oscillate around less than 10 percent.

To sum up, the conducted analysis suggests that the 'old' social class inequalities in the parents' generation are not being reproduced with respect to the 'new' digital inequalities in the children's generation. Among adolescents in the countries under investigation, social class does not differentiate access to the new forms of cultural capital associated with possession, skills, and usage of ICTs. The differences between service class and working class children are not substantial as far as skills and usage access are concerned, and they depend on the availability of the technology among the general population as far as physical access is concerned. Thus, one may expect that as the Internet penetration rate among the general population increases in the countries in which in 2006 service class adolescents enjoyed substantially higher probability of having the Internet access at home, so the advantage of service class adolescents in these societies will decrease to unsubstantial levels already characteristic of technologically more advanced countries.

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3.7. Tables for Chapter 3

Table 3.1. Ordinal regression coefficients for the difference in the probability of having the Internet at home between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class.

Country	Service-working class difference	Standard error	N
Australia	0.78***	0.07	14,170
Austria	0.93***	0.10	4,927
Belgium	1.02***	0.10	8,857
Bulgaria	0.98***	.09	4,498
Canada	0.67***	0.06	22,646
Chile	1.43***	0.08	5,233
Colombia	1.03***	0.10	4,478
Croatia	0.82***	0.09	5,213
The Czech Republic	1.09***	0.06	5,932
Denmark	0.83***	0.21	4,532
Finland	0.61***	0.15	4,714
Germany	0.88***	0.12	4,891
Greece	0.67***	0.07	4,873
Hungary	1.16***	0.09	4,490
Iceland	0.55*	0.27	3,789
Ireland	0.94***	0.10	4,585
Italy	0.85***	0.04	21,773
Japan	1.11***	0.09	5,952
Jordan	1.27***	0.08	6,509
Korea	0.35	0.19	5,176
Latvia	1.01***	0.08	4,719
Lithuania	1.12***	0.09	4,744
Macao	0.94***	0.16	4,760
The Netherlands	0.76***	0.23	4,871
New Zealand	1.24***	0.14	4,823
Norway	0.75***	0.17	4,692
Poland	1.08***	0.08	5,547
Portugal	1.41***	0.11	5,109
Qatar	0.93***	0.11	6,265
The Russian Federation	1.03***	0.07	5,799
Serbia	0.99***	0.08	4,798
Slovakia	1.05***	0.08	4,731
Slovenia	0.95***	0.11	6,595
Spain	1.03***	0.05	19,604
Sweden	0.51*	0.21	4,443
Switzerland	0.67***	0.09	12,192
Thailand	1.56***	0.09	6,192
Turkey	0.78***	0.08	4,942
Uruguay	1.28***	0.08	4,839
		Total N =	266,903

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

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.2. Ordinal regression coefficients for the difference in the probability of having the Internet at home between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class.

Country	Service-working class difference	Standard error	N
Australia	0.81***	0.08	14,170
Austria	0.92***	0.13	4,927
Belgium	0.76***	0.12	8,857
Bulgaria	1.05***	0.09	4,498
Canada	0.78***	0.07	22,646
Chile	1.44***	0.10	5,233
Colombia	1.20***	0.13	4,478
Croatia	1.31***	0.11	5,213
The Czech Republic	1.23***	0.09	5,932
Denmark	1.13***	0.24	4,532
Finland	0.77***	0.16	4,714
Germany	0.84***	0.15	4,891
Greece	1.09***	0.09	4,873
Hungary	1.28***	0.09	4,490
Iceland	0.92**	0.30	3,789
Ireland	0.98***	0.12	4,585
Italy	0.88***	0.05	21,773
Japan	0.56***	0.12	5,952
Jordan	0.70***	0.21	6,509
Korea	-0.11	0.26	5,176
Latvia	0.74***	0.09	4,719
Lithuania	1.15***	0.07	4,744
Macao	0.55**	0.18	4,760
The Netherlands	0.77**	0.30	4,871
New Zealand	0.99***	0.13	4,823
Norway	0.98***	0.21	4,692
Poland	1.36***	0.09	5,547
Portugal	1.53***	0.14	5,109
Qatar	1.02***	0.21	6,265
The Russian Federation	0.78***	0.08	5,799
Serbia	1.05***	0.09	4,798
Slovakia	1.02***	0.09	4,731
Slovenia	1.19***	0.11	6,595
Spain	0.93***	0.06	19,604
Sweden	1.15***	0.26	4,443
Switzerland	0.68***	0.12	12,192
Thailand	1.15***	0.11	6,192
Turkey	1.11***	0.19	4,942
Uruguay	1.70***	0.10	4,839
* p<0.05, ** p<0.01, *** p<0.001		Total N =	266,903

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.3. Service class-working class average marginal effects for having the Internet at home	
Australia	7.13
Austria	13.81
Belgium	7.85
Bulgaria	20.85
Canada	6.12
Chile	24.87
Colombia	13.83
Croatia	20.13
The Czech Republic	21.20
Denmark	4.80
Finland	4.64
Germany	10.51
Greece	19.64
Hungary	26.92
Iceland	2.15
Ireland	14.31
Italy	15.42
Japan	15.08
Jordan	18.81
Korea	0.81
Latvia	19.15
Lithuania	23.64
Macao	7.32
The Netherlands	2.20
New Zealand	10.68
Norway	4.70
Poland	24.94
Portugal	29.47
Qatar	16.79
The Russian Federation	18.59
Serbia	22.00
Slovakia	22.15
Slovenia	14.51
Spain	18.21
Sweden	3.09
Switzerland	4.52
Thailand	20.80
Turkey	15.83
Uruguay	28.91
Source: The PISA 2006 dataset. Own calculations.	

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-internetathomeNM_27-02-2012.smcl"

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Table 3.4. Service class advantage over working class regressed on the indicators of the Internet penetration rate, educational expansion, and country wealth

	τ_m	τ_n
Internet penetration rate in 2006	-0.62** (0.21)	-0.70* (0.28)
educational expansion in 2006	-0.21 (0.23)	-0.07 (0.31)
log GDP per capita in 2006	-0.003 (0.06)	0.02 (0.08)
Constant	1.39* (0.58)	1.18 (0.78)
Number of Observations	39	39
R-squared	0.39	0.25
Standard error of the estimate	0.21	0.28

* p≤0.05, ** p≤0.01, *** p≤0.001

Standard errors reported in parentheses.

Note: τ_m represents the model in which the value of the advantage that the respondents whose fathers belong to service class enjoy over the respondents whose fathers belong to working class is regressed on the 2006 values of: the Internet penetration rate among the general population, a country's educational expansion measured by the percentage of gross enrolment in tertiary education, and a country's wealth measured by the log of GDP per capita at purchasing power parity (current international dollars). coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's self-reported frequency of computer use at home.

τ_n represents the model in which the value of the advantage that the respondents whose mothers belong to service class enjoy over the respondents whose mothers belong to working class is regressed on the 2006 values of: the Internet penetration rate among the general population, a country's educational expansion measured by the percentage of gross enrolment in tertiary education, and a country's wealth measured by the log of GDP per capita at purchasing power parity (current international dollars).

The constant is where the regression line intercepts the *y* axis, representing the amount the dependent variable *y* (service class advantage over working class) will be when the three independent variables are set to 0.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\ExcelFiles\2nd-stage-22-03-2012.spss"

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Table 3.5. Ordinal regression coefficients for the difference in skills between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.24***	0.04	13,447
Austria	0.43***	0.08	4,739
Belgium	0.11*	0.06	8,170
Bulgaria	0.36***	0.08	3,935
Canada	0.09**	0.03	20,500
Chile	0.59***	0.09	4,512
Colombia	0.58***	0.09	3,908
Croatia	0.22**	0.08	4,639
The Czech Republic	0.38***	0.07	5,532
Denmark	0.34***	0.08	4,185
Finland	-0.05	0.07	4,545
Germany	0.17*	0.08	4,373
Greece	0.08	0.07	4,533
Hungary	0.40***	0.09	4,272
Iceland	0.10	0.08	3,614
Ireland	0.14*	0.07	3,932
Italy	.16***	0.03	20,644
Japan	0.29***	0.08	4,955
Jordan	0.53***	0.07	5,803
Korea	0.21**	0.07	5,118
Latvia	0.33***	0.09	4,513
Lithuania	0.42***	0.08	4,315
Macao	0.36***	0.08	4,303
The Netherlands	0.03	0.08	4,505
New Zealand	0.15	0.07	4,566
Norway	-0.06	0.08	4,367
Poland	0.40***	0.07	5,372
Portugal	0.28**	0.10	4,935
Qatar	0.47***	0.11	4,755
The Russian Federation	0.52***	0.07	5,398
Serbia	0.47***	0.08	4,357
Slovakia	0.35***	0.07	4,399
Slovenia	0.19**	0.06	6,130
Spain	0.13***	0.04	18,368
Sweden	0.04	0.07	4,177
Switzerland	0.13**	0.04	11,602
Thailand	0.50***	0.08	5,943
Turkey	0.24***	0.07	4,307
Uruguay	0.55***	0.09	3,992
* p<0.05, ** p<0.01, *** p<0.001		Total N =	245,660

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.6. Ordinal regression coefficients for the difference in skills between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.21***	0.06	13,447
Austria	0.20*	0.10	4,739
Belgium	0.14*	0.07	8,170
Bulgaria	0.61***	0.09	3,935
Canada	0.16***	0.04	20,500
Chile	0.56***	0.10	4,512
Colombia	0.52***	0.10	3,908
Croatia	0.40***	0.09	4,639
The Czech Republic	0.57***	0.08	5,532
Denmark	0.16	0.10	4,185
Finland	0.01	0.08	4,545
Germany	0.04	0.10	4,373
Greece	0.29***	0.09	4,533
Hungary	0.49***	0.09	4,272
Iceland	0.07	0.10	3,614
Ireland	0.21*	0.09	3,932
Italy	0.16***	0.04	20,644
Japan	0.22*	0.11	4,955
Jordan	0.32	0.19	5,803
Korea	0.27**	0.09	5,118
Latvia	0.54***	0.09	4,513
Lithuania	0.43***	0.08	4,315
Macao	0.25**	0.10	4,303
The Netherlands	0.15	0.10	4,505
New Zealand	0.22*	0.09	4,566
Norway	0.19	0.12	4,367
Poland	0.75***	0.08	5,372
Portugal	0.66***	0.11	4,935
Qatar	0.76***	0.20	4,755
The Russian Federation	0.54***	0.07	5,398
Serbia	0.52***	0.09	4,357
Slovakia	0.78***	0.09	4,399
Slovenia	0.09	0.07	6,130
Spain	0.04	0.05	18,368
Sweden	0.21**	0.09	4,177
Switzerland	-0.03	0.06	11,602
Thailand	0.23**	0.09	5,943
Turkey	0.52**	0.18	4,307
Uruguay	0.70***	0.10	3,992
* p<0.05, ** p<0.01, *** p<0.001		Total N =	245,660

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.7. Service class-working class average marginal effects for skills				
	Skills access index (HIGHCONF)			
	No confidence	Low confidence	Moderate confidence	High confidence
Australia	-0.27	-2.79	0.78	2.28
Austria	-0.37	-3.91	1.62	2.66
Belgium	-0.18	-1.87	1.05	0.99
Bulgaria	-2.66	-7.44	8.36	1.74
Canada	-0.18	-1.71	0.49	1.39
Chile	-1.62	-8.19	6.32	3.49
Colombia	-3.03	-8.87	9.93	1.97
Croatia	-1.22	-4.99	4.21	2.00
The Czech Republic	-0.98	-6.23	2.41	4.79
Denmark	-0.32	-4.16	3.02	1.45
Finland	0.06	0.53	0.43	0.17
Germany	-0.16	-1.62	0.78	1.00
Greece	-0.97	-3.39	3.26	1.09
Hungary	-1.50	-7.14	5.93	2.71
Iceland	-0.13	-1.41	0.88	0.67
Ireland	-2.09	-3.30	3.55	0.81
Italy	-0.78	-2.87	2.95	0.71
Japan	-2.64	-3.23	5.33	0.53
Jordan	-2.42	-6.53	5.77	3.18
Korea	-0.95	-4.52	4.81	0.66
Latvia	-0.59	-7.00	5.11	2.48
Lithuania	-1.48	-6.87	6.51	1.84
Macao	-1.08	-5.65	5.63	1.11
The Netherlands	-0.05	-1.33	0.58	0.80
New Zealand	-0.33	-3.04	1.99	1.37
Norway	-0.16	-1.62	-0.40	1.39
Poland	-1.70	-8.38	4.26	5.81
Portugal	-0.73	-4.49	0.24	4.98
Qatar	-4.08	-9.16	6.87	6.35
The Russian Federation	-4.21	-7.82	8.71	3.31
Serbia	-2.73	-7.83	8.04	2.52
Slovakia	-3.91	-8.72	10.06	2.57
Slovenia	-0.25	-2.22	1.34	1.12
Spain	-0.24	-1.31	0.90	0.65
Sweden	-0.34	-2.23	1.75	0.83
Switzerland	-0.17	-1.23	0.78	0.63
Thailand	-3.17	-5.53	8.17	0.53
Turkey	-2.96	-5.61	6.37	2.21
Uruguay	-3.17	-9.63	9.50	3.29
Source: The PISA 2006 dataset. Own calculations.				

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-olog-skills2_27-02-2012.smcl"

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Table 3.8. Ordinal regression coefficients for the difference in educational use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.12***	0.04	13,499
Austria	0.08	0.07	4,802
Belgium	0.12**	0.05	8,314
Bulgaria	0.07	0.07	3,954
Canada	0.10***	0.03	20,553
Chile	0.08	0.07	4,644
Colombia	0.26***	0.07	3,927
Croatia	0.06	0.07	4,684
The Czech Republic	0.18**	0.06	5,565
Denmark	0.05	0.07	4,263
Finland	-0.01	0.07	4,620
Germany	0.03	0.06	4,443
Greece	-0.24***	0.06	4,582
Hungary	-0.04	0.07	4,317
Iceland	0.17*	0.07	3,640
Ireland	-0.005	0.07	4,181
Italy	-0.05	0.03	20,827
Japan	0.04	0.08	4,966
Jordan	0.25***	0.06	5,867
Korea	0.18**	0.07	5,108
Latvia	0.17**	0.07	4,534
Lithuania	0.25***	0.07	4,545
Macao	0.42***	0.07	4,394
The Netherlands	0.13*	0.07	4,554
New Zealand	0.17**	0.06	4,592
Norway	0.17**	0.06	4,423
Poland	0.17**	0.06	5,377
Portugal	-0.09	0.08	4,942
Qatar	0.06	0.09	5,406
The Russian Federation	0.32***	0.06	5,437
Serbia	0.26***	0.06	4,527
Slovakia	0.11	0.07	4,555
Slovenia	0.07	0.06	6,146
Spain	-0.01	0.03	18,512
Sweden	0.12	0.07	4,241
Switzerland	0.002	0.04	11,768
Thailand	0.02	0.07	6,050
Turkey	-0.01	0.07	4,373
Uruguay	0.33***	0.07	4,084
* p<0.05, ** p<0.01, *** p<0.001		Total N =	249,216

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.9. Ordinal regression coefficients for the difference in educational use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.02	0.05	13,499
Austria	-0.02	0.08	4,802
Belgium	0.04	0.06	8,314
Bulgaria	0.06	0.07	3,954
Canada	0.10**	0.04	20,553
Chile	0.06	0.08	4,644
Colombia	0.34***	0.09	3,927
Croatia	0.12	0.08	4,684
The Czech Republic	0.15*	0.07	5,565
Denmark	0.07	0.08	4,263
Finland	-0.005	0.08	4,620
Germany	-0.10	0.08	4,443
Greece	0.05	0.08	4,582
Hungary	0.25**	0.08	4,317
Iceland	0.09	0.09	3,640
Ireland	0.02	0.09	4,181
Italy	-0.01	0.04	20,827
Japan	0.15	0.12	4,966
Jordan	-0.0001	0.17	5,867
Korea	0.13	0.09	5,108
Latvia	0.10	0.08	4,534
Lithuania	0.26***	0.07	4,545
Macao	0.19*	0.09	4,394
The Netherlands	0.08	0.08	4,554
New Zealand	-0.12	0.08	4,592
Norway	0.03	0.10	4,423
Poland	0.37***	0.07	5,377
Portugal	0.16	0.09	4,942
Qatar	0.35*	0.18	5,406
The Russian Federation	0.46***	0.07	5,437
Serbia	0.17*	0.08	4,527
Slovakia	0.26***	0.08	4,555
Slovenia	-0.16**	0.06	6,146
Spain	-0.04	0.04	18,512
Sweden	0.22**	0.08	4,241
Switzerland	-0.10	0.05	11,768
Thailand	0.24**	0.08	6,050
Turkey	0.05	0.15	4,373
Uruguay	0.25**	0.08	4,084
* p<0.05, ** p<0.01, *** p<0.001		Total N =	249,216

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.10. Service class-working class average marginal effects for educational use					
	ICT/Internet educational use				
	Never	Less than once a month	Between once a week and once a month	A few times each week	Almost every day
Australia	-0.76	-1.04	1.07	0.65	0.08
Austria	-0.75	-0.45	0.85	0.37	0.02
Belgium	-1.36	-0.35	1.21	0.43	0.07
Bulgaria	-0.82	-0.72	0.28	1.02	0.25
Canada	-1.43	-1.05	1.55	0.81	0.12
Chile	-1.05	-0.68	0.73	0.88	0.12
Colombia	-3.74	-3.56	2.58	4.27	0.44
Croatia	-1.47	-0.73	1.07	1.00	0.13
The Czech Republic	-1.81	-2.27	2.21	1.63	0.25
Denmark	-0.94	-0.37	0.93	0.35	0.04
Finland	0.23	-0.09	-0.12	-0.02	-0.004
Germany	-1.10	-0.34	-0.94	0.45	0.05
Greece	-2.74	-0.76	1.62	1.57	0.32
Hungary	-1.64	-2.02	1.95	1.57	0.15
Iceland	-2.51	-0.16	1.98	0.56	0.13
Ireland	-0.36	-0.11	0.19	0.06	0.01
Italy	0.63	0.05	-0.45	-0.21	-0.03
Japan	-2.24	1.55	0.55	0.11	0.03
Jordan	-1.49	-1.61	0.82	2.00	0.28
Korea	3.54	0.89	2.12	0.47	0.07
Latvia	-1.44	1.81	1.45	1.65	0.19
Lithuania	-2.85	-3.31	2.57	3.17	0.42
Macao	-5.55	-0.30	4.52	1.19	0.13
The Netherlands	-1.59	-0.79	1.68	0.64	0.08
New Zealand	-2.52	-0.90	2.14	1.19	0.10
Norway	-1.00	-1.44	1.40	0.89	0.15
Poland	-3.37	-2.89	3.16	3.07	0.34
Portugal	-0.92	-2.07	1.00	1.80	0.20
Qatar	-2.77	-2.15	0.83	2.83	1.25
The Russian Federation	-6.79	-2.51	3.82	4.81	0.68
Serbia	-4.16	-1.02	2.79	2.08	0.32
Slovakia	-2.97	-1.45	2.45	1.78	0.20
Slovenia	-0.95	-1.74	1.07	1.40	0.23
Spain	0.51	0.04	-0.35	-0.17	-0.03
Sweden	-3.85	0.98	2.14	0.62	0.12
Switzerland	0.85	0.27	0.77	0.32	0.05
Thailand	-1.14	-1.91	0.91	1.99	0.16
Turkey	-0.42	-0.27	0.20	0.42	0.08
Uruguay	-4.35	-2.77	1.71	4.65	0.77
Source: The PISA 2006 dataset. Own calculations.					

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-olog-educuse2_29-02-2012.smcl"

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Table 3.11. Ordinal regression coefficients for communicational use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.19***	0.04	13,627
Austria	0.48***	0.07	4,828
Belgium	0.15**	0.05	8,426
Bulgaria	0.44***	0.08	4,056
Canada	0.16***	0.03	20,881
Chile	0.83***	0.08	4,732
Colombia	0.57***	0.07	4,114
Croatia	0.24***	0.07	4,766
The Czech Republic	0.41***	0.06	5,695
Denmark	0.21**	0.07	4,360
Finland	0.13	0.07	4,644
Germany	0.54***	0.07	4,515
Greece	0.06	0.06	4,693
Hungary	0.66***	0.08	4,398
Iceland	0.0002	0.09	3,686
Ireland	0.60***	0.07	4,295
Italy	0.41***	0.03	21,131
Japan	0.35***	0.07	5,017
Jordan	0.59***	0.06	6,249
Korea	0.04	0.06	5,144
Latvia	0.48***	0.08	4,622
Lithuania	0.54***	0.07	4,598
Macao	0.38***	0.07	4,465
The Netherlands	0.04	0.09	4,704
New Zealand	0.36***	0.06	4,655
Norway	0.19*	0.08	4,502
Poland	0.72***	0.07	5,456
Portugal	0.63***	0.08	4,984
Qatar	0.47***	0.09	5,677
The Russian Federation	0.65***	0.06	5,532
Serbia	0.51***	0.07	4,601
Slovakia	0.63***	0.07	4,617
Slovenia	0.42***	0.06	6,249
Spain	0.35***	0.03	18,912
Sweden	0.20**	0.07	4,306
Switzerland	0.25***	0.04	11,976
Thailand	0.71***	0.07	6,095
Turkey	0.28***	0.07	4,458
Uruguay	0.69***	0.08	4,245
		Total N =	253,911

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

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.12. Ordinal regression coefficients for communicational use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class

Country	Service-working class difference	Standard error	N
Australia	0.20***	0.05	13,627
Austria	0.32***	0.09	4,828
Belgium	0.02	0.07	8,426
Bulgaria	0.60***	0.08	4,056
Canada	0.14***	0.04	20,881
Chile	0.69***	0.09	4,732
Colombia	0.75***	0.09	4,114
Croatia	0.33***	0.08	4,766
The Czech Republic	0.64***	0.07	5,695
Denmark	0.14	0.09	4,360
Finland	0.05	0.08	4,644
Germany	0.19*	0.08	4,515
Greece	0.27***	0.08	4,693
Hungary	0.69***	0.08	4,398
Iceland	0.13	0.11	3,686
Ireland	0.41***	0.08	4,295
Italy	0.33***	0.04	21,131
Japan	0.27**	0.11	5,017
Jordan	-0.09	0.17	6,249
Korea	-0.05	0.08	5,144
Latvia	0.52***	0.08	4,622
Lithuania	0.49***	0.07	4,598
Macao	0.26**	0.09	4,465
The Netherlands	0.06	0.11	4,704
New Zealand	0.20**	0.08	4,655
Norway	0.03	0.12	4,502
Poland	0.80***	0.07	5,456
Portugal	0.66***	0.10	4,984
Qatar	0.61***	0.17	5,677
The Russian Federation	0.45***	0.07	5,532
Serbia	0.53***	0.08	4,601
Slovakia	0.80***	0.08	4,617
Slovenia	0.42***	0.07	6,249
Spain	0.19***	0.04	18,912
Sweden	0.27**	0.09	4,306
Switzerland	0.05	0.06	11,976
Thailand	0.61***	0.08	6,095
Turkey	0.43**	0.16	4,458
Uruguay	0.54***	0.08	4,245
* p<0.05, ** p<0.01, *** p<0.001		Total N =	253,911

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.13. Service class-working class average marginal effects for communicational use					
	ICT/Internet communicational use				
	Never	Less than once a month	Between once a week and once a month	A few times each week	Almost every day
Australia	-1.53	-0.07	-1.01	-1.57	4.81
Austria	-4.12	-1.65	-2.30	-1.51	9.57
Belgium	-0.53	-0.20	-0.37	-0.74	1.84
Bulgaria	-3.74	-2.01	-2.23	-3.56	11.54
Canada	-0.75	0.42	-0.72	-1.31	3.02
Chile	-8.50	-3.02	-3.23	-2.77	17.51
Colombia	-12.29	-1.94	-1.03	2.84	12.42
Croatia	-4.60	-1.57	-0.73	1.67	5.23
The Czech Republic	-4.15	-2.49	-3.45	-2.47	12.56
Denmark	-1.32	-0.67	-0.96	-1.34	4.29
Finland	-0.35	-0.35	-0.42	-0.86	1.98
Germany	-4.23	-1.60	-1.73	-1.31	8.89
Greece	-3.53	-0.39	0.13	1.19	2.61
Hungary	-7.08	-3.43	-3.37	-1.71	15.59
Iceland	-1.85E-03	-1.32E-03	-2.40E-03	-0.01	1.22E-02
Ireland	-11.23	-0.60	0.10	2.10	9.64
Italy	-7.91	-0.82	-0.07	1.63	7.17
Japan	-7.65	0.85	1.52	2.33	2.96
Jordan	-7.66	-0.36	-0.50	2.40	5.11
Korea	-0.45	-0.30	0.28	1.71E-06	1.02
Latvia	-2.58	-1.51	-2.70	-4.48	11.25
Lithuania	-5.66	-2.10	-2.22	-2.30	12.28
Macao	-2.01	-1.88	-2.20	-1.82	7.89
The Netherlands	-0.14	-0.05	-0.15	-0.46	0.80
New Zealand	-3.10	-1.39	-1.40	-0.71	6.60
Norway	-0.38	-0.20	-0.45	-1.00	2.02
Poland	-11.11	-3.59	-2.09	0.38	16.41
Portugal	-6.94	-3.07	-2.98	-1.84	14.83
Qatar	-7.86	-2.35	-2.21	-0.22	12.64
The Russian Federation	-13.05	0.33	1.16	3.92	7.66
Serbia	-11.77	-0.57	0.30	2.57	9.47
Slovakia	-10.81	-3.36	-2.26	1.43	14.98
Slovenia	-3.98	-1.70	-2.13	-2.21	10.01
Spain	-2.60	-1.10	-1.25	-1.62	6.57
Sweden	-1.24	-0.65	-1.15	-2.08	5.10
Switzerland	-1.28	-0.55	-0.73	-1.07	3.62
Thailand	-10.75	-3.08	-1.13	4.71	10.24
Turkey	-5.46	-1.38	-1.22	0.83	7.23
Uruguay	-6.84	-2.37	-2.90	-2.08	14.18
Source: The PISA 2006 dataset. Own calculations.					

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-olog-communic_01-03-2012.smcl"

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Table 3.14. Ordinal regression coefficients for entertainment use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class

Country	Service-working class difference	Standard error	N
Australia	-0.03	0.04	13,565
Austria	0.06	0.06	4,802
Belgium	-0.12**	0.05	8,362
Bulgaria	0.18**	0.07	4,016
Canada	-0.06*	0.03	20,752
Chile	0.48***	0.07	4,657
Colombia	0.41***	0.07	4,018
Croatia	0.28***	0.07	4,721
The Czech Republic	0.31***	0.06	5,609
Denmark	-0.04	0.07	4,292
Finland	-0.11	0.06	4,616
Germany	-0.01	0.06	4,474
Greece	0.06	0.06	4,648
Hungary	0.12	0.07	4,357
Iceland	-0.06	0.07	3,669
Ireland	0.08	0.06	4,232
Italy	0.16***	0.03	21,001
Japan	0.18*	0.08	4,986
Jordan	0.50***	0.06	6,007
Korea	-0.14*	0.06	5,125
Latvia	0.16*	0.07	4,583
Lithuania	0.36***	0.07	4,574
Macao	0.17*	0.07	4,426
The Netherlands	-0.09	0.06	4,608
New Zealand	-0.06	0.06	4,633
Norway	-0.15*	0.06	4,461
Poland	0.34***	0.06	5,410
Portugal	0.14	0.08	4,960
Qatar	0.23**	0.09	5,525
The Russian Federation	0.46***	0.06	5,435
Serbia	0.26***	0.06	4,553
Slovakia	0.31***	0.07	4,576
Slovenia	0.19***	0.06	6,177
Spain	0.16***	0.03	18,604
Sweden	-0.02	0.06	4,277
Switzerland	-0.003	0.04	11,851
Thailand	0.40***	0.07	6,071
Turkey	0.29***	0.07	4,391
Uruguay	0.24***	0.07	4,152
* p<0.05, ** p<0.01, *** p<0.001		Total N =	251,176

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.15. Ordinal regression coefficients for entertainment use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class

Country	Service-working class difference	Standard error	N
Australia	-0.09	0.05	13,565
Austria	-0.06	0.08	4,802
Belgium	-0.17**	0.06	8,362
Bulgaria	0.37***	0.07	4,016
Canada	-0.07*	0.04	20,752
Chile	0.40***	0.08	4,657
Colombia	0.40***	0.09	4,018
Croatia	0.30***	0.08	4,721
The Czech Republic	0.20**	0.07	5,609
Denmark	-0.07	0.08	4,292
Finland	-0.09	0.07	4,616
Germany	-0.16*	0.08	4,474
Greece	0.18*	0.08	4,648
Hungary	0.39***	0.08	4,357
Iceland	0.08	0.09	3,669
Ireland	0.02	0.08	4,232
Italy	0.14***	0.04	21,001
Japan	0.27*	0.11	4,986
Jordan	0.15	0.17	6,007
Korea	-0.13	0.09	5,125
Latvia	0.23***	0.07	4,583
Lithuania	0.42***	0.07	4,574
Macao	0.30***	0.09	4,426
The Netherlands	-0.10	0.08	4,608
New Zealand	-0.10	0.08	4,633
Norway	-0.12	0.10	4,461
Poland	0.44***	0.07	5,410
Portugal	0.21*	0.09	4,960
Qatar	0.28	0.18	5,525
The Russian Federation	0.37***	0.07	5,435
Serbia	0.26***	0.08	4,553
Slovakia	0.59***	0.08	4,576
Slovenia	0.04***	0.06	6,177
Spain	0.06	0.04	18,604
Sweden	0.02	0.08	4,277
Switzerland	-0.11*	0.05	11,851
Thailand	0.46***	0.08	6,071
Turkey	0.52***	0.16	4,391
Uruguay	0.39***	0.08	4,152
* p<0.05, ** p<0.01, *** p<0.001		Total N =	251,176

Note: Positive values indicate the advantage of service class children in comparison with working class children.
Source: The PISA 2006 dataset. Own calculations.

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Table 3.16. Service class-working class average marginal effects for entertainment use

	ICT/Internet entertainment use				
	Never	Less than once a month	Between once a week and once a month	A few times each week	Almost every day
Australia	0.54	0.22	0.10	0.78	-0.54
Austria	0.88	0.46	0.24	0.69	-0.41
Belgium	1.32	1.60	0.24	-1.72	-1.42
Bulgaria	-1.29	-2.22	-2.30	0.60	5.20
Canada	0.40	0.77	0.37	-0.80	-0.75
Chile	-4.98	-4.39	0.08	5.76	3.53
Colombia	-6.36	-2.97	0.99	5.69	2.63
Croatia	-2.76	-3.22	-0.27	3.34	2.91
The Czech Republic	-2.63	-2.41	-0.26	2.55	2.74
Denmark	0.67	0.37	-0.09	-0.51	-0.44
Finland	1.27	0.81	-0.13	-1.00	-0.95
Germany	1.31	0.50	-0.30	0.87	-0.65
Greece	-1.08	-1.31	-0.40	1.40	1.39
Hungary	-2.20	-3.03	-0.25	2.95	2.52
Iceland	-0.60	-0.77	-0.05	0.75	0.68
Ireland	-0.89	-0.34	0.35	0.60	0.28
Italy	-2.08	-1.40	0.15	1.82	1.50
Japan	-5.38	1.55	2.13	1.30	0.40
Jordan	-4.24	-3.26	0.66	4.64	2.20
Korea	0.66	1.70	0.32	-1.85	-0.82
Latvia	-1.91	-1.72	-0.62	1.67	2.57
Lithuania	-3.76	-3.22	-0.96	3.08	4.86
Macao	-0.85	-2.69	-1.90	3.55	1.88
The Netherlands	0.34	1.15	0.72	-0.95	-1.27
New Zealand	0.89	0.80	-0.17	-0.99	-0.55
Norway	0.74	1.34	0.71	-0.94	-1.84
Poland	-4.72	-3.30	0.30	3.92	3.80
Portugal	-2.13	-1.56	-0.04	2.04	1.76
Qatar	-2.00	-2.57	-1.69	3.00	3.26
The Russian Federation	-6.02	-3.51	1.35	5.19	3.00
Serbia	-2.60	-3.34	-0.06	2.76	3.24
Slovakia	-5.83	3.81	1.39	5.00	3.26
Slovenia	-0.81	-1.17	-0.48	0.94	1.50
Spain	-1.11	-1.20	-0.21	1.30	1.22
Sweden	-0.27	-0.18	-0.004	0.20	0.25
Switzerland	0.68	0.47	-0.05	-0.64	-0.46
Thailand	-6.19	-3.57	1.57	6.31	1.88
Turkey	-4.46	-3.86	-0.37	5.27	3.41
Uruguay	-4.48	-2.61	0.62	3.79	2.70

Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-olog-entert2_02-03-2012.smcl"

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4. Gender and Digital Usage Inequality among Adolescents

4.1. Introduction

To what extent are the current usage patterns of ICTs influenced by one's gender? Does the traditional 'gender penalty' associated with being female still exists as regards the use of computers and the Internet? The present chapter intends to address these questions with reference to adolescents living in the countries that, in 2006, administered the ICT Familiarity module in the framework of the OECD's PISA study. The analysis, using ordinal regression modeling, suggests that boys have an advantage over girls with regard to the frequency of the educational use of computers and the Internet. On the other hand, the male advantage in the reported frequency of computer use at home and in entertainment ICT/Internet usage points to the existence of a possible vulnerability of boys as regards dangers associated with computer gaming. Finally, the traditional advantage of girls with respect to the use of ICTs as a communication tool receives limited support from the analysis conducted.

The chapter is organized as follows. The second section provides theoretical background for the investigation on gender inequalities in ICTs usage, while section three introduces the research question and formulates its research hypotheses. Section four discusses data, measurements, and methods used in the analysis, while section five reports the results of the analysis. Section six summarizes the chapter's findings and answers the research question.

4.2. Theoretical considerations

One of the most striking features of the second part of the 20th and the early 21st century is the profound change that has taken place concerning the position and role of women in society. In all developed and in many developing countries, one can observe a steady trend towards gender equity in all areas of private and public life (Castells 2001b: 134-242). This transformation – or, as some prefer to put it, quiet revolution (Goldin 2006) – is far from over, and its results in the form of a new shape of social order are not yet determined

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(Esping-Andersen 2009). One can, however, discern even now the basic features of the emerging *nouveau régime*. Among these one can mention, for example, the increased participation of women in the labor force in general and their entry into traditionally male-dominated professional areas in particular (Meece 2006).

With respect to such traditional men's bulwarks as ICT subjects and careers, changes towards a greater gender balance have been pronounced especially in recent years. Describing the situation in the 1990s one could still argue that:

> In most industrialized countries, women appear to be a minority in computer science. Data comparing men's and women's CS [Computer Science] education internationally showed that in 1995, men earned twice as many math and CS degrees as women earned in Canada, Germany, Ireland, Japan, Spain and the US (...) Three times as many math and CS degrees went to men in Austria, New Zealand, Norway and the UK. Only in Italy did men and women earn close to the same number of math and CS degrees (Cohoon 2003, in: Anderson et al. 2008: 1305).

In the meantime, She Figures 2009 report (European Commission 2009) shows for countries of the European Union an increase of female participation in the field of computer science, although the gender imbalance in favor of men still continues to characterize this field of study. On average in the EU-27, in 2006 45% of all PhD graduates were women and over the period 2002-2006 the number of female PhD graduates increased at a rate of 6.8% per year compared with 3.2% for male PhD graduates. Even though the field of science, mathematics, and computing is still characterized by higher numbers of male PhD holders, in 2006 women constituted a large proportion of graduates in this area too: 38% in the US and 41% in the EU-27. Between 2002 and 2006, in all fields of study in the EU-27, the number of female PhD graduates increased much more rapidly than the number of male PhD graduates, but a particularly high growth rate in the number of female PhDs over that period was observed in computing (in the EU-27: 13% per year for women vs. 9% per year for men, in the US: 16% per year for women vs. 18% per year for men). The report therefore concludes that:

> the substantial rise in women's level of education that has marked the last 20 years and women's massive flow into all educational levels is now also very clearly visible at the PhD level. Moreover, the growth rate in the number of female PhD graduates is

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systematically higher than that of men in all fields and subfields of science. These are all very positive signals of a rapid catching up movement by women, so that in the near future women will level with men at the PhD level, if not surpass them. The downside is the problem of persisting gender segregation (European Commission 2009: 47).

Similarly positive trends are reported for the United States. As two American psychologists summarize:

Nation's Report Card, the National Assessment of Educational Progress (NAEP), shows that *there are no longer gender differences in the number of demanding mathematics courses taken in high school*. Furthermore, *girls do better, on average, than do boys in these courses, earning consistently higher scores*. Second, without interruption, *in every year since 1966, the proportion of women earning bachelor's degrees in scientific and engineering fields has increased. By 2001, the number of women earning bachelor's of science degrees actually exceeded the number of men earning in some STEM fields*. (...) *Men and women earn equal grades in college math classes that are of comparable difficulty, and this has been true for a long time*. Finally, (...) *women major in mathematics in nearly equal numbers to men. In recent years, for example, women earned 48% of bachelor's degrees in mathematics*. (...) In addition to their impressive performance on high school NAEP mathematics tests and their gains in undergraduate math and science degrees, *women are also attaining doctoral degrees in scientific and engineering fields in growing numbers. By 2001, women earned 37% of PhDs in scientific and engineering fields, up from just 8% in 1966*. However, as was true for bachelor's degrees, disproportionately more of these PhDs were earned in non-math-intensive STEM fields such as biology and the social sciences. Nevertheless, *women have made impressive gains even in the most math-intensive fields: They are currently obtaining 29% of the PhDs in mathematics, 17% in combined engineering, and 22% in computer/information sciences*. And as mentioned earlier, women's successes have been even greater in some other scientific fields that are not considered math intensive but nevertheless require mathematical competence: Women currently obtain 50% of the MD degrees from medical schools, almost 75% of the DVMs from veterinary schools, and 48% of PhDs in biology/life sciences. A generation ago, the corresponding percentages were far lower in all of these fields (italics added – T. D.) (Ceci and Williams 2010: 17-18).

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Moving down the educational ladder, when it comes to contemporary adolescents – i.e., the age category studied in this chapter – previous research shows a remarkable gender variation in math-, science-, and literacy-related achievement patterns by country. For example, using PISA 2000 and PISA+ samples from 42 countries, van Langen et al. (2006) explored the influence of the relative differences in achievement between boys and girls (so-called gender achievement gaps) within the fields of mathematics, science, and reading at the secondary level of education in relation to students' choice of science, technology, engineering, and mathematics fields of study (hereinafter STEM) at the tertiary level of education. Their analyses show that national gender gaps for science, mathematics, and reading literacy in secondary education correlate highly with each other: in countries where girls lag less behind boys in mathematics and science, they also are more ahead of boys in reading. Conversely, in countries where boys lag less behind girls in reading, they also are more ahead of girls in mathematics and science.

The estimation made for relations between the relative achievement of girls with respect to boys in secondary education and a country's female STEM participation in tertiary education also revealed that an unfavorable position for girls with respect to boys in terms of achievement in secondary education is related to lower percentages of female students enrolling in tertiary education STEM courses. However, in countries where girls' advantage over boys in reading is more pronounced, girls' participation rate in STEM studies is also higher.

Van Langen et al. also found that the mathematics achievements of boys, students from higher socio-economic milieus, and non-immigrants are significantly higher than the mathematics achievements of girls, students from lower socio-economic milieus, and immigrants, respectively. The only significant interaction terms between gender and mathematics literacy are related to the degree of urbanization at the level of the school and the differentiation in the educational system at the level of the country. Girls in rural areas show a smaller mathematics lag with respect to boys than elsewhere, but they tend to lag more behind boys with respect to mathematics literacy, as the educational system in a country is less comprehensive and more differentiated. Similar results were achieved for science literacy and reading literacy – although the latter case goes in the opposite direction for gender. That is, girls, pupils with a higher socio-economic status, and non-immigrants attain significantly higher reading scores than boys, pupils with a lower socio-economic status, and immigrants, respectively. However, contrary to the cases of mathematics and science literacy, for reading proficiency, the main effect of the degree of differentiation in educational system

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is not statistically significant. The interaction term of differentiation for the educational system with gender, however, proved significant: the reading lead of girls over boys is greatest in countries with a more comprehensive educational system. The interaction term of the degree of urbanization at the level of the school with gender appears significant as well: the relative position of girls with respect to boys is more favorable in rural areas than in urban areas. In other words, with respect to girls, the boys in rural areas are further behind as regards reading literacy than elsewhere. Moreover, in countries where women are more economically active compared to countries where women are less economically active, girls are further ahead of boys with respect to reading literacy.

Based on the results of their analyses, van Langen et al. claim that the following general pattern can be distinguished: the more integrated the educational system of the country, the smaller the gender gap for mathematics and science literacy (i.e., the less girls lag behind boys) and the larger the gender gap for reading proficiency (i.e., the greater the lead of girls over boys). In short, the relative position of girls with respect to boys is more favorable within such integrated systems with regard to mathematics and science literacy, while the relative position of boys with respect to girls as regards reading is less favorable in such integrated systems. Thus, integrated educational systems seem generally to be more favorable to the achievement of girls relative to boys than differentiated educational systems.

Another investigation of cross-country gender differences in math-, science, and literacy-related achievement patterns was conducted by Guiso et al. (2008). On the basis of data from the PISA 2003 study, the authors looked at gender differences in performance across 40 countries. They found a positive correlation between gender gap in mathematics and gender equity (measured with the World Economic Forum's Gender Gap Index, which reflects economic and political opportunities, education, and well-being for women (Hausmann et al. 2006)). In more gender-neutral countries (such as Norway or Sweden) the math gender gap disappears and becomes statistically insignificant. Moreover, the gender gap in reading, which favors girls and is apparent in all countries, expands in more gender-equal societies. Thus, Guiso et al. conclude that girls' underperformance in math relative to boys is eliminated in more gender-equal cultures, except for geometry (where the boys' advantage relative to the girls' is the biggest) and arithmetic (where the boys' advantage relative to the girls' is the smallest). In more gender-equal societies, girls perform as well as boys in mathematics and much better than them in reading. These results suggest – with respect to ICTs use in general and ICT/Internet educational use as defined in this chapter (see below) in particular – a certain ambiguity. On the one hand, if it turns out that girls outperform boys

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when it comes to ICT/Internet educational usage, such an advantage might be interpreted in girls favor, namely, as a sign of their greater diligence in pursuing academic success. On the other hand, if it turns out that it is boys who outperform girls as far as ICT/Internet educational usage is concerned, then such an advantage might be interpreted against boys, as an indication that they use educational software more often than girls because they are educationally underachieving and thus in need of improving their academic performance. Unfortunately, in the case at hand it cannot be adjudicated which interpretation of the statistical results is more plausible. The information available in the dataset used for the analysis presented in this chapter simply does not allow one to distinguish whether more frequent usage of ICTs for educational purposes is a sign of the respondent being in high or low scholastic achievement track. Admittedly, such an interpretational agnosticism is a major weakness of the present study, a weakness that cannot, however, be avoided because of, as it were, 'structural' problems connected with the unavailability of appropriate information in the dataset used.

With respect to gender differences in access to and use of the Internet, cross-national analyses conducted in the framework of the World Internet Project (www.worldinternetproject.net) reveal a curvilinear pattern: in the Internet high-use countries, such as the USA and Sweden, and in low-use countries, such as Hungary and Taiwan, gender differentials are smaller; however in middle-use nations like Italy and Singapore, Internet use differences between men and women are greater. There are no major differences in these patterns between Asian and European countries. In all twelve countries assessed for the WIP study, men use the Internet somewhat more than women (see Figure 4.1). However, the fact that high-use countries show diminished gender differences lends support to the hypothesis that as the Internet penetration rate increases, the gender gap in Internet use is closing (Dutton et al. 2007: 35-36). It needs to be added, though, that further analyses conducted only on the British data coming from the same study indicate that women, on average, have been using the Internet for a shorter time than men (13% of female and 9% of male users said they first used the Internet less than a year before the time of the interview); that even controlling for the length of experience, women rate their own Internet abilities lower than men; that controlling for the length of experience, women are still spending less time online than men; and that Internet use in Britain was in 2003 still significantly divided by gender, with 64% of men and 55% of women questioned saying that they used the Internet around the time of the interview. Given the predominance of women in

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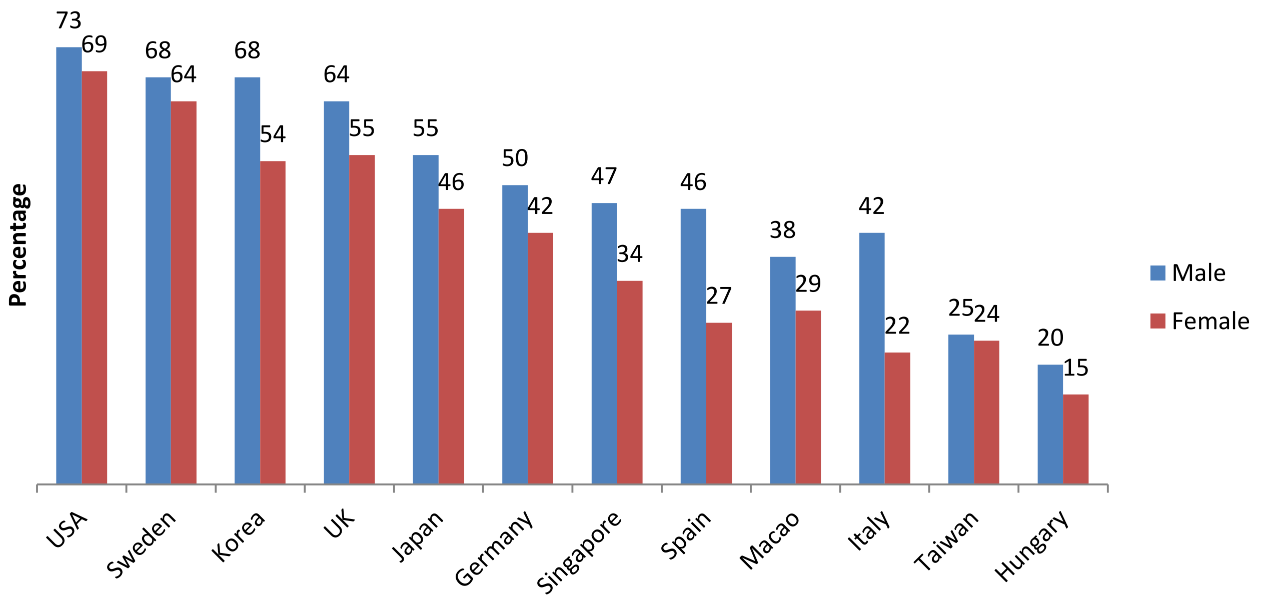
the overall British population, this translated at that time into 47% of Internet users being women (Liff and Shepherd 2004).

Various studies conducted in the 1990s and the early 2000s on gender-related ICT differences among students at different levels of education showed a consistent pattern: female students were likely to have less positive perceptions of their computer competence and were less attracted to computers than their male peers (for the U.S., Busch 1995; Nelson and Cooper 1997; for Greece, Vekiri and Chronaki 2008). They also appeared to use computers less frequently both inside and outside school (for Finland, Hakkarainen et al. 2000; for the UK, Mumtaz 2001; a review article of various research studies conducted in the 1990s, Volman and van Eck 2001). Additionally, a more recent investigation by Notten et al. based on a multilevel analysis of 30 countries taking part in the PISA 2003 study found that compared to boys, girls have 20 percent lower odds of having the Internet access at home, 34 percent lower odds of using the Internet for informational purposes, and 78 percent lower odds of playing games on a computer (Notten et al. 2009: 555).

Figure 4.1. Cross-National Internet Use by Gender, circa 2003 (source: Dutton et al. 2007: 36)



More recent studies, however, draw a more gender-balanced picture. Thus, for example, Popovic et al., comparing the results from the Attitudes Towards Computer Usage Scale (ACTUS) (Popovic et al. 1987) obtained from undergraduate students at one of the universities in the American Midwest in 1986 and 2005, concluded that: ‘many of the sex differences that were found in 1986 were not found in 2005. *Males and females no longer*

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significantly differ in their attitudes toward computers, whereas they did in 1986. Additionally, no significant sex differences were found in the number of college computer courses, the amount of time spent using computers, or on the amount of self-reported computer anxiety' (italics added – T. D.) (Popovic et al. 2008: 991).

In Asia, Tsai and Tsai (2010), in their gender and geographically representative study of 1,080 fourteen-year olds in Taiwan, found no gender gap in computer and Internet self-efficacy, with girls being more confident than boys regarding online communication. While the authors found significant gender differences in students' online purposes and Internet use intensity, they did not find any gender differences in Internet use experience and computer ownership. In other words, boys tend to use the Internet as an entertainment tool while girls tend to use it as a communication tool, while boys also use the Internet significantly longer than girls in terms of weekly time spent online (the authors attributed this result to the boys' higher interest in playing online or computer games). Boys and girls do not differ, however, in the Internet use experience in terms of years and in their opportunities of accessing the Internet. In another Asian study on computer attitudes among adolescents, no gender difference was found among eighteen-year old students (107 boys and 76 girls) enrolled at a post-secondary educational institution in Singapore (Teo 2008).

As regards Europe, on the basis of their research on the accessibility and attractiveness of different types of educational ICT applications for boys and girls conducted in Dutch primary and secondary schools, Volman et al. (2005: 52) suggest that there are fewer gender differences in attitude regarding ICTs among younger pupils than among older pupils and that therefore – in a context of a technologically advanced society – one can expect the disappearance of such differences in future generations. With respect to slightly older ICT users, in their study of 23 female and 25 male students (most of them aged 20-25) from different departments at the University of Frankfurt, Imhof et al. found no gender differences in the measure of computer self-efficacy and no gender gap in study-related computer use, neither in terms of time spent at the computer nor in terms of preferred activities at the computer. They did find, however, differences between men and women concerning computer use for personal purposes and the kinds of uses for which they went online, with men using computers for personal or non-study activities more often. The authors also found a difference in computer performance, with men outperforming women on the assigned PowerPoint task that involved redesigning transparencies. The maximum number of points one could score on the task was 15, with men reaching the mean of 11.40

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and standard deviation of 2.11 and women reaching the mean of 9.74 and standard deviation of 2.26 (with $t(37) = 2.38$, $p < 0.05$, and $d=0.76$) (Imhof et al. 2007: 2833).

Thus, this literature review can be concluded by saying that one of the most robust findings in the previous research on gender differences in broadly understood access to ICTs is the fact that women (girls) use computers and the Internet in a different manner than men (boys). With respect to adolescents, it has been shown that whereas boys use computers and the Internet predominantly for 'solitary,' recreational purposes (e.g., playing games, downloading music, etc.) and are more interested in technical aspects of ICT; girls prefer to use computers and the Internet primarily as a communication medium (e.g., they e-mail and chat more intensively than boys) (Volman et al. 2005; Jackson et al. 2008; Jackson et al. 2010; Kuhlemeier and Hemker 2007; Tsai and Tsai 2010).

4.3. Research question and research hypotheses

For all the reasons stated above, it is also useful and interesting to carry out a comparative investigation on how gender exerts its influence on contemporary adolescents with respect to their access to ICTs. As some of the research mentioned in the previous section suggests, gender imbalance in computer possession, attitudes towards ICTs, and self-reported levels of skills in using computers and the Internet is withering away among young people (at least in the most developed and gender-equal societies). Therefore this chapter focuses solely on the area of access to ICTs where the gender inequality still seems to be pronounced and substantial. In other words, this chapter investigates what van Dijk (2005: 20) termed usage access (or usage inequality) to computers and the Internet. The research question thus reads as follows: 'Do adolescent girls living in contemporary societies lag behind adolescent boys with respect to computer and the Internet usage?'

To answer the research question, three research hypotheses are examined:

Hypothesis 1: In general, boys use computers more often than girls.

Hypothesis 2: Girls use computers and the Internet more often than boys for educational purposes.

Hypothesis 3: Girls use computers and the Internet more often than boys for communicational purposes.

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Hypothesis 4: Boys use computers and the Internet more often than girls for entertainment purposes.

4.4. Data, measurements, and methods

Data have been drawn from the 2006 PISA project. Details about the methodology underlying the PISA 2006 survey, as well as a comprehensive description of the OECD PISA 2006 international database, are to be found in OECD (2009a, 2009b). As part of the survey, an ICTs Familiarity Questionnaire – containing questions relevant for the study of the physical, skills and usage aspects of access to computers and the Internet among fifteen-year olds – was conducted in 40 countries. The analyses reported here include 39 out of 40 countries that administered the ICTs Familiarity Questionnaire in the framework of their 2006 PISA survey, namely: Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Korea, Latvia, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, the Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Turkey, and Uruguay. Because of its small sample size, Lichtenstein – a developed country that also administered the ICTs Familiarity Questionnaire in 2006 – is not reported in the analyses that follow.

To measure a unique effect of gender on computers and Internet usage inequality, a number of control variables are specified in the analysis. First of all, the influence of both father's and mother's occupation and level of education is taken into account. The reason for controlling for both parents' socio-economic background is the result of following Korupp et al.'s (2002) recommendation based on their analysis of children's educational success. In their study based on the U.S., West German, and Dutch household surveys, these above-mentioned authors conclude that:

> The Modified Dominance Model that classifies the SES of both parents hierarchically (into a higher and lower status parent) fits the data best. (…) Our results have produced conclusive evidence for the argument that, within the family, the resources of the lower status parent are important for the educational attainment of children. In the introduction we suggested that the mother's influence possibly has become more important in recent years, compared to that of the father. (…) No evidence is produced for this

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> case. On the contrary, historical trend of parental influence on the child's education is the same for the mother as it is for the father. (...) If the status of the mother and the father differ, it seems to be the case that children are not unequivocally pulled towards the higher status parent's platform, but range somewhere between them (Korupp et al. 2002: 37).

In this chapter, information on the occupation of the respondent's father is elicited by two questions that ask respondents about their father's main job and what he did in his main job. Similarly, information on the occupation of the respondent's mother is elicited by two questions that ask respondents about their mother's main job and what she did in her main job. It is worth mentioning that even students younger than fifteen years of age have been shown to accurately provide information about their parents' occupation (West et al.: 2001). The information on parental occupation is coded according to the International Standard Classification of Occupation 1988 (ISCO-88), as provided by the International Labour Office. ISCO-88 is a four-digit hierarchical coding schema comprising 533 different occupational categories.

To address the problem of the small size of many of the original father's occupational categories, since these distorted the analysis, the following procedure is implemented. Nine countries with samples larger than 5,000 respondents are selected: Australia, Belgium, Canada, Italy, Japan, Korea, Portugal, Spain, and Switzerland. In each case, the original father's occupational categories (henceforth referred to as 'the zero order occupational categories') are scrutinised and those which have fewer than ten respondents are merged (for each country separately) into first-order occupational categories. Categories of similar job description are merged so that the first-order occupational categories resemble the original ones as much as possible. To allow for comparability across all countries under investigation, similar first-order occupational categories are subsequently merged into second-order occupational categories. Because each original occupational category turns out to be represented by fewer than ten respondents in at least one of the nine 'large-sample' countries, all the original occupational categories are merged onto the second-order level. Thus, for the purposes of further analysis, the number of ISCO-88 occupational categories is reduced from an initial 533 (plus one comprising respondents whose fathers are in categories outside of the labour market, whose occupations are unknown or vaguely described, or the information about which is missing) to 41 second-order occupational categories. The same scheme of 41 second-order occupational categories that is developed for the respondents' fathers is applied

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to deal with the small size of many of the original mother's occupational categories as well. Table 4.1 gives a description of the second-order occupational categories. Details of the rearrangement of the original father's and mother's occupational categories into the second order occupational categories are available in the Excel files 'Father.xls' and 'Mother.xls' to be found on a CD attached to this dissertation.

The father's level of education is measured by six dummy variables that indicate respondents whose fathers do not have more than primary education (which functions as the reference category[59]) and subsequently those having lower secondary, secondary vocational, secondary academic, the first stage of tertiary, and the second stage of tertiary education. The same dummy variables is used to measure the mother's level of education.

The wealth of the respondent's household is measured by the index of wealth constructed from four items listed in the PISA 2006 dataset: having a room of one's own in the household, the number of cellular phones in the household, the number of TV sets in the household, and the number of cars in the household. Higher values on the wealth index indicate a greater affluence of the respondent's household.[60]

The level of the household's cultural capital is measured by the number of books that respondents reported having in their households. For simplicity's sake, the original PISA 2006 variable comprising six categories is collapsed into three dummy variables that indicate low (up to 25 books, the reference category), medium (between 26 and 100 books), and high (more than 100 books) level of cultural capital.

The respondent's migration background is measured as a dummy variable. This is coded as zero when the respondent is a native in a given country and as one when the respondent is a first- or the second-generation immigrant.

To account for a possible digital usage inequality as the result of geographical location, three variables indicating the size of the community in which the respondent's school is located are constructed: a village (the reference category) if the school is located in a place of up to 15,000 people, a town if the school is located in a place with a number of inhabitants between 15,000 and 100,000, and a city if the school is located in a place with more than 100,000 inhabitants.

To examine a possible effect of the gender composition of peers group, two dummy variables are created. The one is coded as one if the respondent is a girl attending a girls'

[59] Because in Japan there are no respondents whose fathers as well as mothers have less than primary or primary education, the reference category for that country are the respondents who reported their fathers and their mothers having the lower secondary education.
[60] For details about a construction of the index of household's wealth, see Appendix 2.

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school, and zero if otherwise; the other is coded as one if the respondent is a boy attending a boys' school, and zero if otherwise. Schools are identified as exclusively male or exclusively female if the number of girls or the number of boys enrolled in them as of February 1st 2006 were equal to zero. With respect to these two variables it has to be added, though, that in all countries under investigation only 364 boys attend boys' schools and only 294 girls attend girls' schools, so the corresponding coefficients should be interpreted with extreme caution. Table 4.2 presents the number of respondents attending non-coeducational schools for each gender and each country under investigation.

Because the dependent variable is operationalized as an ordinal one, which violates the first assumption of the classical linear regression model according to which the dependent variable can be calculated as a linear function of a specific set of independent variables and a disturbance term (Kennedy 2008: 41), the data are analyzed using the logit version of the ordinal regression model (ORM) (Long 1997; Long and Freese 2003) introduced by McKelvey and Zavoina (1975) and McCullagh (1980) who referred to it as the proportional odds model.

To examine the first research hypothesis, two models are fitted:

$$Y = \alpha + \beta J + \gamma K + \delta L + \zeta M + \eta N + \theta O + \lambda P + \mu R + \nu S + \xi T + \rho U + \sigma V + \tau W + \varepsilon \qquad (1)$$

and:

$$Y = \alpha + \beta J + \gamma K + \delta L + \zeta M + \eta N + \theta O + \lambda P + \mu R + \nu S + \xi T + \rho U + \sigma V + \tau W + \varepsilon \qquad (2)$$

With respect to the left-hand side of equation (1), Y stands for the ordinal variable that records the respondents' answers to the question: 'How often do you use a computer at home?;' while on the left-hand side of equation (2), Y stands for the ordinal variable that records the respondents' answers to the question: 'How often do you use a computer at other places [than home or school – a note by T. D.]?' For both items, the reversed answer scale ranges from 1 (= 'Never'), to 2 (= 'Once a month or less'), to 3 (= 'A few times a month'), to 4 (= 'Once or twice a week'), and to 5 (= 'Almost every day'). The consistency analysis performed on the two items reveals that they cannot form a single scale (in all countries under investigation Cronbach's alpha is smaller than 0.5).

With respect to the right-hand of equation (1), α is the intercept (constant), J is the occupation of the respondent's father, K is the occupation of the respondent's mother, L is the father's level of education, M is the mother's level of education, N is the wealth of the

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respondent's household, O is a dummy variable coded as one if the respondent is missing on the index of household's wealth and coded as zero if otherwise, P is the level of the household's cultural capital, R is a dummy variable coded as one if the respondent is missing on the indicator of cultural capital and coded as zero if otherwise, S is the respondent's migration background, T is the size of the community in which the respondent's school is located, U indicates whether the respondent is a boy attending a boys' school, V indicates whether the respondent is a girl attending a girls' school, and finally W is the variable girl coded as one for a girl and as zero for a boy. The error term is specified as ε. In equation (2), all the right-hand side symbols are defined as in equation (1).

To examine the second research hypothesis, the following model is fitted:

$$Y = \alpha + \beta J + \gamma K + \delta L + \zeta M + \eta N + \theta O + \lambda P + \mu R + \nu S + \xi T + \rho U + \sigma V + \tau W + \varepsilon \qquad (3)$$

where the dependent variable Y is operationalized as the index of ICT/Internet educational use constructed out of five items: 1. The respondent's frequency of using computers to write documents (e.g. with Microsoft Word or WordPerfect); 2. The respondent's frequency of using computers and the Internet to collaborate with a group or team; 3. The respondent's frequency of using spreadsheets (e.g., Microsoft Excel or Lotus); 4. The respondent's frequency of using graphics programs for drawing or painting; 5. The respondent's frequency of using educational software (such as Mathematics programs). For all items, the reversed scale ranges from 1 (= 'Never'), to 2 (= 'Less than once a month'), to 3 (= 'Between once a week and once a month'), to 4 (= 'A few times each week'), to 5 (= 'Almost every day'). The same scale is applied for the overall index. The consistency analysis performed on the above-mentioned five items reveals that they can form a single scale. The lowest value of Cronbach's alpha is recorded for Austria at 0.68 and Australia at 0.69, while in all the other countries under study the value of Cronbach's alpha is greater than 0.70 or 0.80. With respect to the symbols on the right-hand side of equation (3), they are all defined in the same way as the symbols in equation (1).

To examine the third research hypothesis, the following model is fitted:

$$Y = \alpha + \beta + \gamma K + \delta L + \zeta M + \eta N + \theta O + \lambda P + \mu R + \nu S + \xi T + \rho U + \sigma V + \tau W + \varepsilon \qquad (4)$$

where the dependent variable Y is operationalized as the respondent's answers to the question: 'How often do you use computers for communication (e.g., e-mail or 'chat

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rooms')?' The answers are recorded on the same reversed scale that was used for the items constituting the index of ICT/Internet educational use. All the symbols on the right-hand side of equation (4) are defined as the symbols in equation (1).

Finally, to examine the fourth research hypothesis, the following model is fitted:

$$Y = \alpha + \beta + \gamma K + \delta L + \zeta M + \eta N + \theta O + \lambda P + \mu R + \nu S + \xi T + \rho U + \sigma V + \tau W + \varepsilon \qquad (5)$$

where the dependent variable r is operationalized as the index of ICT/Internet entertainment use constructed out of three items: 1. The respondent's frequency of using computers for playing games; 2. The respondent's frequency of using computers for downloading software from the Internet (including games); 3. The respondent's frequency of using computers for downloading music from the Internet. Again, the same reversed scale is applied as in the case of the index of ICT/Internet educational use. The consistency analysis performed on the above-mentioned three items reveals that they can form a single scale. The lowest value of Cronbach's alpha is recorded for the Netherlands at 0.61, with all other countries under study having this value greater than that. With respect to the symbols on the right-hand side of equation (5), they are all defined in the same way as the symbols in equation (1).

The analyses reported in this chapter were carried out with Stata 11 and SPSS 18 statistical packages.

4.5. Results

My first hypothesis states that, in general, boys use computers more often than girls. Table 4.3 presents the effects that gender exerts on the respondent's self-declared frequency of computer use at home. The coefficients of gender difference and standard errors reported in this table are estimations of the coefficient for the dummy variable girl (W), coded as one for girls and as zero for boys, in equation (1). The negative values of the coefficient indicate that, holding control variables specified in the model constant, boys report using computers at home more often than girls. It turns out that in 32 of the 39 countries under study, being a boy significantly increases the respondent's frequency of computer use at home at the 0.001 level (in Austria, Belgium, Bulgaria, Canada, Chile, Croatia, the Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Iceland, Italy, Jordan, Korea, Latvia, Lithuania, Macao, New Zealand, Norway, Poland, Portugal, the Russian Federation, Serbia, Slovakia, Slovenia,

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Spain, Sweden, Switzerland, Turkey, and Uruguay). Boys' advantage is also statistically significant in Japan at the 0.01 level and in Australia at the 0.05 level. In the remaining five countries under investigation (Colombia, Ireland, the Netherlands, Qatar, and Thailand), gender does not affect the respondent's self-reported frequency of computer use at home in a statistically significant way.

In turn, Table 4.4 presents the effects that gender exerts on the respondent's self-declared frequency of computer use at other places than home or school. Again, the coefficients of gender difference and standard errors reported in that table are estimations of the coefficient for the dummy variable girl (W), coded as one for girls and as zero for boys, in equation (2). And again, the negative values of the coefficient indicate that, holding control variables specified in the model constant, boys report using computers at other places than home or school more often than girls. The results are very similar to those obtained from the previous operationalization of the dependent variable for the first hypothesis. It turns out that in 35 of the 39 countries under investigation being a boy significantly increases the respondent's frequency of computer use at places other than home or school at the 0.001 level (in Australia, Austria, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Korea, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, the Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, and Turkey). Being a boy is also statistically significant in Chile at the 0.01 level. In the remaining three countries under study (Colombia, Latvia, and Uruguay), gender does not affect the respondent's self-reported frequency of computer use at other places than home or school in a statistically significant way.

To sum up, boys report using computers at home more often than girls in all the countries under study except for Colombia, Ireland, the Netherlands, Qatar, and Thailand. They also report using computers at places other than home or school more often than girls in all countries under investigation but Colombia, Latvia, and Uruguay. In other words, no matter whether the computer usage is reported at home or at places other than home or school, the analysis suggests the first hypothesis claiming that in general boys use computers more often than girls should not be rejected in the vast majority of countries under investigation.

My second hypothesis states that girls use computers and the Internet for educational purposes more often than boys. Table 4.5 presents the effects that gender exerts on the respondent's score on the index of ICT/Internet educational use. The coefficients of gender

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difference and standard errors reported in that table are estimations of the coefficient for the dummy variable girl (W), coded as one for girls and as zero for boys, in equation (3). The negative values of the coefficient indicate that, holding the control variables specified in the model constant, girls score lower than boys on the index of ICT/Internet educational use. The analysis reveals that in 32 of the 39 countries under study being a girl significantly decreases the respondent’s score on the index of ICT/Internet educational use at the 0.001 level (in Australia, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark, Finland, Germany, Greece, Iceland, Italy, Japan, Jordan, Korea, Latvia, Lithuania, the Netherlands, Norway, Poland, Qatar, the Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and Uruguay). Being a girl is also statistically significant in Austria, Hungary, and Macao at the 0.05 level. In the remaining three countries under study (Ireland, Portugal, and Thailand), gender does not affect the respondent’s score on the index of ICT/Internet educational use in a statistically significant way. The only positive value of the dummy variable ‘girl’ that indicates girls’ advantage over boys is the statistically insignificant value of the coefficient in Ireland. Thus, contrary to expectations, one can conclude that the second hypothesis claiming girls use computers and the Internet more often than boys for educational purposes should be rejected for all countries under investigation. It has to be added that such a result is not a consequence of specifying control variables in the model, because (as Table 4.6 shows) the coefficients barely change when gender is specified in the logit version of the ordinal regression model as the only independent variable.

Following the results of the existing research mentioned above (Volman et al. 2005; Jackson et al. 2008; Jackson et al. 2010; Kuhlemeier and Hemker 2007; Tsai and Tsai 2010) suggesting that girls are being more confident than boys regarding online communication and that they prefer to use computers and the Internet primarily as a communication medium, my third hypothesis is that girls use computers and the Internet more often than boys for communicational purposes. Table 4.7 presents the effects that gender exerts on the respondent’s self-reported frequency of computer use for communication (e.g. using email or ‘chat rooms’). The coefficients of gender difference and standard errors reported in that table are estimations of the coefficient for the dummy variable girl (W), coded as one for girls and as zero for boys, in equation (4). The analysis reveals that although in Belgium, Colombia, Germany, Lithuania, Sweden, and Uruguay being a girl has a positive effect, and in Croatia, Macao, Poland, and Portugal, a negative effect on the respondent’s frequency of computer use for communication, gender difference coefficients in these ten countries are not statistically significant. In further thirteen countries under investigation, being a girl significantly increases the respondent's self-reported frequency of computer use as a communication tool at the 0.001 level (in Australia, Austria, Canada, Hungary Iceland, Ireland, Japan, Latvia, the Netherlands, New Zealand, Slovakia, Slovenia, and Spain). Being a girl is also statistically significant in the Czech Republic, Chile, Iceland, and Norway at the 0.01 level; and in Denmark and Finland at the 0.05 level. On the other hand, in eight countries under investigation, Greece, Italy, Jordan, Korea, Qatar, the Russian Federation, Serbia, and Turkey, being a girl significantly decreases the respondent's self-reported frequency of computer use as a communication tool at the 0.001 level. Girls' disadvantage is also statistically significant in Thailand at the 0.01 level and in Bulgaria at the 0.05 level. The unexpected negative effect of being a girl on the respondent's self-reported frequency of computer use as a communication tool can most probably be explained away by the generally low status of women in the above-mentioned ten countries. In 2006, 115 countries were assessed for the Gender Gap Index. Keeping in mind that low values of this indicator point to the unfavourable situation of women in a given society, the overall score of the index was 0.65 for Greece[61] (69) and Italy (77), 0.61 for Jordan (93), 0.62 for Korea (92), 0.60 for Qatar (109), 0.68 for the Russian Federation (49), 0.59 for Turkey (105), 0.68 for Thailand (40), and 0.69 for Bulgaria (37). For comparison purposes, in the same year the overall score on the Gender Gap Index was 0.80 for Norway (2) and Finland (3) and 0.75 for Denmark (8).

To sum up, the third hypothesis stating that girls use computers and the Internet more often than boys for communicational purposes should not be rejected for the slight majority of countries under investigation (nineteen of the 39). Contrary to expectations, however, boys self-report that they use the computers for communication more often than girls in ten of the countries under study, and in the remaining ten countries the respondent's gender does not have a statistically significant effect on the declared frequency of using the computers for communication with other people. In other words, the analysis suggests that the third hypothesis should receive only limited and conditional support.

My fourth hypothesis states that boys use computers and the Internet more often than girls for entertainment purposes. Table 4.8 presents the effects that gender exerts on the respondent's score on the index of ICT/Internet entertainment use. The coefficients of gender

[61] In what follows, the country's position in the ranking of gender equality is reported in the parentheses, with a higher position in the ranking indicating a better situation of women in society relative to other countries being ranked. The values for Qatar refer to 2007, when 128 countries were assessed for the Gender Gap Index. No data are available for Serbia, as she did not participate either in 2006 or 2007 edition of the global Gender Gap Index ranking.

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difference and standard errors reported in that table are estimations of the coefficient for the dummy variable girl (W), coded as one for girls and as zero for boys, in equation (5). The negative values of the coefficient indicate that, holding the control variables specified in the model constant, boys score on the index of ICT/Internet entertainment use higher than girls. The analysis reveals that in all the countries under study being a boy significantly increases the respondent's score on the ICT/Internet index of entertainment use at the 0.001 level. Therefore, the fourth hypothesis should not be rejected: boys do indeed use computers and the Internet for entertainment more often than girls.

To explore the cultural inputs to the above results, the values of gender difference coefficients from each of the five models under current investigation are regressed separately on the measure of a country's gender equality and on the measure of a country's economic development. Following a similar and already mentioned above analysis by Guiso et al. (2008), the estimator used is ordinary least-squares regression.[62] Gender equality in a given country is operationalized as the country's 2006 score on the Gender Gap Index (larger values of the Gender Gap Index point to a better position of women in society) prepared by the World Economic Forum (Hausmann et al. 2006: 9).[63] This indicator reflects the position of women in a given country by taking into account their economic opportunities, economic participation, educational attainment, political achievements, health, and well-being. In turn, the level of a country's economic development is operationalized as the natural logarithm of the value of the 2006 real Gross Domestic Product per capita (GDP) in current U.S. dollars, taken from the Penn World Table (Heston et al. 2009).

The results reported in Table 4.9 show that the frequency of computer use at home and the scores on the index of ICT/Internet entertainment use are negatively correlated with the indicator of gender equality in society, controlling for the level of GDP per capita in 2006. On the other hand, the frequency of computer use at places other than home or school and the frequency of computer use for communication are positively correlated with the indicator of gender equality in society, controlling for the level of GDP per capita in 2006. The level of gender equality in a given country is not correlated with the scores on the index of ICT/Internet educational use in a statistically significant way. In other words, the analysis suggests that more gender-equal societies are associated with increasing the negative (for girls) gap in computer use at home and in entertainment use of ICTs and the Internet. It also

[62] The issue whether the estimated dependent variable used in the second stage OLS regression should be weighted using the associated standard errors is still not settled (see Lewis and Linzer 2005). In the present analysis, the weighting is not applied.

[63] Except for Qatar, for which the score on the Gender Gap Index was taken for 2007 (Hausmann et al. 2007: 7).

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suggests that more gender-equal societies are associated with reducing the negative (for girls) gap in computer use at places other than home or school and in the frequency of computer use for communication. The level of a country's gender equality does not have any statistically significant effect on gender gap in educational use of ICTs. The negative sign for the coefficient suggests, however, that – surprisingly – more gender-equal societies are associated with an increasing gender gap in the scores on the index of ICT/Internet educational use in favour of boys. The last, unexpected, result can be interpreted, against its face value, as indicative of boys' disadvantage. Remember that Guiso et al. find that in more gender-equal societies, girls' underperformance in math relative to boys is eliminated and that girls' advantage over boys in reading – present in all kinds of societies – increases. In light of these findings, one can attempt to interpret boys' increased frequency of using educational software in more gender-equal societies as a sign of their educational lagging behind girls. In this interpretation, the group that declares using educational software more often does so out of educational necessity or because it has to, rather than because it wants to use ICTs as a yet another avenue for improving its already good academic performance. One should, however, remain cautious with such an interpretation and keep in mind the proviso made in section two that because of data unavailability, any substantive interpretation of the results of statistical analysis reported in this chapter has to be taken with a grain of salt.

Having the above-mentioned proviso in mind, however, one should allow for the possibility that the results reported in Table 4.9 might be more positive for girls than they seem when looked at face value. The fact that in more gender-equal societies, boys report spending more time using computers at home and simultaneously boys report using ICTs and the Internet more often than girls for entertainment suggests that, in comparison with girls, boys probably spend more of their time playing computer (online and offline) games. Reaching the similar finding about U.S. adolescents, Jackson et al. (2010: 327) expressed in their study a concern that increased computer games playing might be associated with such negative outcomes as a lower behavioural self-concept, lower self-esteem, lower academic performance and more frequent incidents of problem behaviour at school. On the other hand, the fact that in more gender-equal societies girls use computers at places other than home or school and use computers for communicational purposes more often than boys indicates that they might have an upper hand in using the new technologies for the very purpose they were created – communicating with others. At the same time, the more gender-equal society becomes, the more ICTs seem to become a mechanism for boys' escapism that offers them

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ample opportunities of becoming completely absorbed by a ‘solitary’ pursuit of entertainment.

4.6. Conclusions

The question asked in this chapter concerns how gender exerts its influence on contemporary adolescents with respect to their access to ICTs. Because the existing research suggests that gender inequality is currently still most pronounced and substantial with regard to usage patterns of ICTs, this chapter focuses only on what van Dijk (2005: 20) called usage access (or usage inequality) to computers and the Internet. More specifically, the research question posed reads: ‘Do adolescent girls living in contemporary societies lag behind boys with respect to computers and the Internet usage?’ To answer the research question, four research hypotheses were formulated and examined: 1. In general, boys use computers more often than girls; 2. Girls use computers and the Internet more often than boys for educational purposes; 3. Girls use computers and the Internet more often than boys for communicational purposes; and 4. Boys use computers and the Internet more often than girls for entertainment purposes. The chapter’s empirical basis is that of the ICT usage collected for 39 countries that administered the ICT Familiarity Questionnaire in the framework of the 2006 wave of the PISA study on fifteen-year old students.

The analysis reported in the chapter shows that boys report using computers more often than girls in all but three (or five – depending on the way the dependent variable is operationalized) of the countries under investigation. Contrary to what one might have expected, it turns out that girls do not report using computers and the Internet for educational purposes more often than boys. On the other hand, as regards the recreational use of ICTs, in all countries under study boys – as expected – report using ICTs for entertainment more often than girls. The only hypothesis that receives mixed support is the third one, stating that girls use computers and the Internet for communication more often than boys: in nineteen countries, girls indeed report using computers as communication tools more often than boys, while in ten other countries this gender pattern is reversed. In another ten countries, gender does not turn out to be statistically significantly related to the respondent’s communicational use of the ICTs.

The overall picture emerging from the analysis is thus the one of gender inequalities at the face value favouring boys, especially – and surprisingly – when it comes to the educational usage of computers and the Internet. This particular finding – because of its

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possible consequences for gender equality in educational and subsequently labour-market returns – requires further research; a research also looking into whether the increase in the frequency of ICT educational use is a positive sign signalling one's already better-than-average educational performance or, conversely, a negative sign indicating one's educational underperformance. On the other hand, the fact that boys report using computers at home more often than girls and that they also state that they use the ICTs more frequently for entertainment than their female peers points to the possibility that it is girls who are less 'vulnerable' ICTs users and that it is girls who – eventually – will derive more advantages from the opportunities offered by new Information and Communication Technologies.

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4.7. Tables for Chapter 4

Table 4.1. Definition of the father's and mother's second order occupational categories

Description of the occupational category
Legislators, Senior Officials & Managers
Corporate Managers (Large Enterprises)
Military Officers
[Small Enterprise] General Managers
Professionals
Architects, Engineers Etc Professionals
Life Science & Health Professionals
Teaching Professionals
Other Professionals [incl. Professional nfs, Admin. Professional] + Archivists, Librarians Etc Information Professionals
Legal Professionals
Social Science Etc Professionals
Writers & Creative Or Performing Artists
Technicians And Associate Professionals
Life Science And Health Associate Professionals
Nursing and Midwifery Associate Professionals
Teaching Associate Professionals
Other Associate Professionals
Administrative Associate Professionals
Customs, Tax Etc Government Associate Professionals
[Armed forces non-commissioned officers] [incl. Sergeant] + [Manual Foremen NFS --Non-Farm--]
Artistic, Entertainment & Sports Associate Professionals
Clerks
Mail carriers & sorting clerks
Professional Care Etc Work
Astrologers, Fortune-Tellers Etc Workers
[Salespersons, Models & Demonstrators]
Skilled Agricultural & Fishery Workers
[Farmers nfs]
Extraction & Building Trades Workers
Metal, Machinery Etc Trades Workers
Precision, Handicraft, Printing Etc Trades Workers
Food Processing Etc Trades Workers + Wood Treaters, Cabinet-Makers Etc Trades Workers + Textile, Garment Etc Trades
Plant & Machine Operators & Assemblers
Textile-, Fur- & Leather-Products Machine Operators
Food Etc Products Machine Operators
Assemblers
Drivers & Mobile-Plant Operators
Sales & Services Elementary Occupations
Street Services Elementary Occupations [incl. Billposter]
Transport Labourers & Freight Handlers
No Occupation or Missing Occupation

Source: Own compilation, based on Ganzeboom and Treiman (1996: 201-239).

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Tables for Chapter 4

Table 4.2. Respondents attending non-coeducational schools, by country

Country	Girls in girls' schools.	Boys in boys' schools.
Australia	29	25
Austria	1	25
Belgium	1	2
Bulgaria	0	0
Canada	7	3
Chile	2	9
Colombia	4	1
Croatia	1	3
The Czech Republic	0	4
Denmark	0	0
Finland	0	0
Germany	3	1
Greece	1	0
Hungary	0	2
Iceland	0	0
Ireland	37	30
Italy	2	12
Japan	15	8
Jordan	85	92
Korea	43	36
Latvia	0	0
Lithuania	0	2
Macao	3	3
The Netherlands	0	0
New Zealand	30	21
Norway	0	0
Poland	1	0
Portugal	0	0
Qatar	14	20
The Russian Federation	0	0
Serbia	0	0
Slovakia	0	4
Slovenia	2	52
Spain	1	4
Sweden	0	0
Switzerland	1	2
Thailand	5	1
Turkey	6	2
Uruguay	0	0
Total	294	364
Total for boys and girls	658	

Source: The PISA 2006 dataset. Own calculations.

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Table 4.3. Ordinal regression coefficients for the difference in the frequency of computer use at home between boys and girls

Country	Coefficient of gender difference	Standard error	N
Denmark	-0.91***	0.09	4,381
Greece	-0.88***	0.06	4,565
Iceland	-0.88***	0.12	3,675
The Czech Republic	-0.85***	0.07	5,612
Slovakia	-0.85***	0.07	4,463
Sweden	-0.85***	0.09	4,302
Germany	-0.83***	0.07	4,503
Croatia	-0.80***	0.07	4,609
Poland	-0.77***	0.07	5,216
Lithuania	-0.71***	0.08	4,493
Finland	-0.69***	0.08	4,616
Italy	-0.69***	0.03	20,982
Serbia	-0.67***	0.07	4,431
Hungary	-0.66***	0.07	4,355
The Russian Federation	-0.65***	0.06	5,155
Norway	-0.64***	0.11	4,488
Slovenia	-0.60***	0.07	6,225
Bulgaria	-0.54***	0.08	3,946
Macao	-0.54***	0.07	4,569
Latvia	-0.53***	0.07	4,453
Austria	-0.46***	0.06	4,828
Belgium	-0.44***	0.06	8,375
Jordan	-0.43***	0.06	6,114
Switzerland	-0.40***	0.05	11,946
New Zealand	-0.35***	0.06	4,641
Portugal	-0.35***	0.07	4,845
Korea	-0.27***	0.06	5,154
Turkey	-0.26***	0.07	3,740
Uruguay	-0.25***	0.07	3,998
Chile	-0.22***	0.07	4,429
The Netherlands	-0.18	0.11	4,721
Canada	-0.17***	0.04	20,876
Japan	-0.17**	0.05	4,885
Spain	-0.16***	0.03	18,670
Australia	-0.10*	0.04	13,593
Qatar	-0.10	0.06	5,695
Thailand	-0.09	0.06	5,580
Colombia	-0.08	0.07	3,454
Ireland	-0.08	0.06	4,261
* p<0.05, ** p<0.01, *** p<0.001		Total N =	244,583

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. Countries ranked descendingly for the absolute values of their coefficients of gender difference. The value of the coefficient of gender difference in the frequency of computer use at home controlled for: the father's and mother's occupation and level of education; the index of wealth of the respondent's household; the level of the respondent's household cultural capital; the respondent's migration background; the size of the community in which the respondent's school is located; whether the respondent attends a non-coeducational school; and the missing values. Source: The PISA 2006 dataset. Own calculations.

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Table 4.4. Ordinal regression coefficients for the difference in the frequency of computer use at other places between boys and girls

Country	Coefficient of gender difference	Standard error	N
Korea	-1.51***	0.06	5,102
Turkey	-1.42***	0.06	4,156
Greece	-1.10***	0.06	4,574
Qatar	-1.10***	0.05	5,596
Jordan	-0.93***	0.05	6,160
Croatia	-0.85***	0.06	4,572
Macao	-0.80***	0.06	4,455
The Russian Federation	-0.76***	0.05	5,309
Serbia	-0.75***	0.06	4,492
Austria	-0.74**	0.05	4,729
Germany	-0.74***	0.06	4,417
Denmark	-0.67***	0.06	4,334
The Czech Republic	-0.66***	0.05	5,547
Italy	-0.65***	0.03	20,584
Norway	-0.64***	0.06	4,468
Switzerland	-0.64***	0.03	11,725
Slovenia	-0.63***	0.05	6,154
Slovakia	-0.61***	0.06	4,460
Bulgaria	-0.60***	0.06	3,993
Sweden	-0.54***	0.06	4,282
Thailand	-0.52***	0.05	5,627
Belgium	-0.51***	0.04	8,257
The Netherlands	-0.51***	0.05	4,676
Hungary	-0.48***	0.06	4,380
New Zealand	-0.47***	0.05	4,607
Spain	-0.46***	0.03	18,564
Australia	-0.42***	0.03	13,498
Portugal	-0.42***	0.05	4,826
Japan	-0.41***	0.06	4,811
Iceland	-0.38***	0.06	3,665
Canada	-0.37***	0.03	20,905
Finland	-0.37***	0.05	4,602
Poland	-0.37***	0.05	5,196
Ireland	-0.34***	0.06	4,172
Lithuania	-0.33***	0.05	4,515
Chile	-0.17**	0.05	4,624
Colombia	-0.11	0.06	3,767
Uruguay	-0.09	0.06	4,214
Latvia	-0.02	0.05	4,544
		Total N =	244,015

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

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. Countries ranked descendingly for the absolute values of their coefficients of gender difference. The value of the coefficient of gender difference in the frequency of computer use at other places controlled for: the father's and mother's occupation and level of education; the index of wealth of the respondent's household; the level of the respondent's household cultural capital; the respondent's migration background; the size of the community in which the respondent's school is located; whether the respondent attends a non-coeducational school; and the missing values. Source: The PISA 2006 dataset. Own calculations.

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Table 4.5. Ordinal regression coefficients for the difference in the score on the index of ICT/Internet educational use between boys and girls

Country	Coefficient of gender difference	Standard error	N
Australia	-0.18***	0.03	13,499
Austria	-0.12*	0.05	4,802
Belgium	-0.30***	0.04	8,314
Bulgaria	-0.31***	0.06	3,954
Canada	-0.12***	0.03	20,553
Chile	-0.27***	0.05	4,644
Colombia	-0.20***	0.06	3,927
Croatia	-0.45***	0.05	4,684
The Czech Republic	-0.35***	0.05	5,565
Denmark	-0.53***	0.06	4,263
Finland	-0.49***	0.06	4,620
Germany	-0.35***	0.06	4,443
Greece	-0.55***	0.06	4,582
Hungary	-0.12*	0.06	4,317
Iceland	-0.53***	0.06	3,640
Ireland	0.06	0.06	4,181
Italy	-0.21***	0.03	20,827
Japan	0.24***	0.06	4,966
Jordan	-0.19***	0.05	5,867
Korea	0.18***	0.05	5,108
Latvia	-0.56***	0.06	4,534
Lithuania	-0.42***	0.06	4,545
Macao	-0.14*	0.06	4,394
The Netherlands	-0.20***	0.06	4,554
New Zealand	0.13*	0.06	4,592
Norway	-0.58***	0.06	4,423
Poland	-0.47***	0.05	5,377
Portugal	-0.08	0.05	4,942
Qatar	-0.55***	0.05	5,406
The Russian Federation	-0.42***	0.05	5,437
Serbia	-0.28***	0.06	4,527
Slovakia	-0.39***	0.06	4,555
Slovenia	-0.54***	0.05	6,146
Spain	-0.29***	0.03	18,512
Sweden	-0.68***	0.06	4,241
Switzerland	-0.36***	0.03	11,768
Thailand	-0.04	0.05	6,050
Turkey	-0.64***	0.06	4,373
Uruguay	-0.29***	0.06	4,084
* p<0.05, ** p<0.01, *** p<0.001		Total N =	249,216

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. The value of the coefficient of gender difference in the score on the index of ICT/Internet educational use controlled for: the father's and mother's occupation and level of education; the index of wealth of the respondent's household; the level of the respondent's household cultural capital; the respondent's migration background; the size of the community in which the respondent's school is located; whether the respondent attends a non-coeducational school; and the missing values. Source: The PISA 2006 dataset. Own calculations.

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Table 4.6. Ordinal regression coefficients for the difference in the score on the index of ICT/Internet educational use between boys and girls, without control variables specified

Country	Coefficient of gender difference	Standard error	N
Australia	-0.19***	0.03	13,499
Austria	-0.12*	0.05	4,802
Belgium	-0.31***	0.04	8,314
Bulgaria	-0.29***	0.06	3,954
Canada	-0.10***	0.03	20,553
Chile	-0.29***	0.05	4,644
Colombia	-0.24***	0.06	3,927
Croatia	-0.44***	0.05	4,684
The Czech Republic	-0.35***	0.05	5,565
Denmark	-0.53***	0.06	4,263
Finland	-0.46***	0.06	4,620
Germany	-0.35***	0.06	4,443
Greece	-0.57***	0.05	4,582
Hungary	-0.14*	0.06	4,317
Iceland	-0.50***	0.06	3,640
Ireland	0.08	0.06	4,181
Italy	-0.23***	0.03	20,827
Japan	0.22***	0.06	4,966
Jordan	-0.18***	0.05	5,867
Korea	0.16***	0.05	5,108
Latvia	-0.61***	0.06	4,534
Lithuania	-0.45***	0.05	4,545
Macao	-0.12*	0.06	4,394
The Netherlands	-0.20***	0.06	4,554
New Zealand	0.12*	0.05	4,592
Norway	-0.59***	0.06	4,423
Poland	-0.50***	0.05	5,377
Portugal	-0.09	0.05	4,942
Qatar	-0.49***	0.05	5,406
The Russian Federation	-0.45***	0.05	5,437
Serbia	-0.24***	0.05	4,527
Slovakia	-0.39***	0.05	4,555
Slovenia	-0.54***	0.05	6,146
Spain	-0.29***	0.03	18,512
Sweden	-0.68***	0.06	4,241
Switzerland	-0.37***	0.03	11,768
Thailand	-0.05	0.05	6,050
Turkey	-0.60***	0.06	4,373
Uruguay	-0.29***	0.06	4,084
		Total N =	249,216

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

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. Source: The PISA 2006 dataset. Own calculations. Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\GIAV1\Work\LogFiles\20-06-2011.smcl".

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Table 4.7. Ordinal regression coefficients for the difference in the frequency of computer use for communication (e.g. e-mail or 'chat rooms') between boys and girls

Country	Coefficient of gender difference	Standard error	N
Turkey	-0.88***	0.06	4,458
Jordan	-0.74***	0.05	6,249
Greece	-0.63***	0.05	4,693
Austria	0.52***	0.06	4,828
The Russian Federation	-0.48***	0.05	5,532
Latvia	0.43***	0.06	4,622
Canada	0.39***	0.03	20,881
Serbia	-0.38***	0.06	4,601
Ireland	0.35***	0.06	4,295
Qatar	-0.35***	0.05	5,677
Hungary	0.34***	0.06	4,398
The Netherlands	0.33***	0.07	4,704
New Zealand	0.30***	0.06	4,655
Australia	0.26***	0.03	13,627
Korea	-0.26***	0.05	5,144
Japan	0.24***	0.05	5,017
Spain	0.24***	0.03	18,912
Iceland	0.21**	0.08	3,686
Slovakia	0.21***	0.05	4,617
Slovenia	0.20***	0.05	6,249
Norway	0.19**	0.07	4,502
Bulgaria	-0.16*	0.07	4,056
Chile	0.17**	0.06	4,732
Denmark	0.15*	0.06	4,360
Switzerland	0.15***	0.04	11,976
Thailand	-0.15**	0.05	6,095
The Czech Republic	0.14**	0.05	5,695
Italy	-0.14***	0.03	21,131
Finland	0.13*	0.06	4,644
Macao	-0.11	0.06	4,465
Colombia	0.10	0.06	4,114
Croatia	-0.09	0.05	4,766
Portugal	-0.09	0.05	4,984
Uruguay	0.09	0.06	4,245
Poland	-0.07	0.05	5,456
Sweden	0.07	0.07	4,306
Germany	0.04	0.06	4,515
Lithuania	0.04	0.06	4,598
Belgium	0.01	0.05	8,426
* p<0.05, ** p<0.01, *** p<0.001		Total N =	245,485

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. Countries ranked descendingly for the absolute values of their coefficients of gender difference. The value of the coefficient of gender difference in the frequency of computer use for communication (e.g. e-mail or 'chat rooms') controlled for: the father's and mother's occupation and level of education; the index of wealth of the respondent's household; the level of the respondent's household cultural capital; the respondent's migration background; the size of the community in which the respondent's school is located whether the respondent attends a non-coeducational school; and the missing values. Source: The PISA 2006 dataset. Own calculations

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Table 4.8. Ordinal regression coefficients for the difference in the score on the index of ICT/Internet entertainment use between boys and girls

Country	Coefficient of gender difference	Standard error	N
Denmark	-1.98***	0.06	4,292
Iceland	-1.86***	0.07	3,669
Sweden	-1.86***	0.06	4,277
Norway	-1.77***	0.06	4,461
Finland	-1.73***	0.06	4,616
Lithuania	-1.73***	0.06	4,574
Germany	-1.68***	0.06	4,474
Korea	-1.59***	0.06	5,125
The Czech Republic	-1.56***	0.05	5,609
Latvia	-1.50***	0.06	4,583
Slovenia	-1.46***	0.05	6,177
Slovakia	-1.44***	0.06	4,576
Poland	-1.41***	0.05	5,410
Austria	-1.35***	0.06	4,802
Belgium	-1.35***	0.04	8,362
Turkey	-1.35***	0.06	4,391
Switzerland	-1.32***	0.04	11,851
Croatia	-1.30***	0.06	4,721
Portugal	-1.30***	0.05	4,960
The Netherlands	-1.27***	0.06	4,608
Hungary	-1.24***	0.06	4,357
Bulgaria	-1.19***	0.06	4,016
Macao	-1.15***	0.06	4,426
Uruguay	-1.09***	0.06	4,152
Australia	-1.08***	0.03	13,565
Greece	-1.08***	0.06	4,648
Italy	-1.05***	0.03	21,001
Spain	-1.05***	0.03	18,604
New Zealand	-1.04***	0.06	4,633
Chile	-1.00***	0.06	4,657
Canada	-0.98***	0.03	20,752
The Russian Federation	-0.93***	0.05	5,435
Ireland	-0.89***	0.06	4,232
Serbia	-0.82***	0.06	4,553
Colombia	-0.80***	0.06	4,018
Thailand	-0.76***	0.05	6,071
Japan	-0.62***	0.05	4,986
Jordan	-0.55***	0.05	6,007
Qatar	-0.34***	0.05	5,525
* p<0.05, ** p<0.01, *** p<0.001		Total N =	245,651

Note: Negative values of the coefficient indicate the girls' disadvantage in comparison with boys. Countries ranked descendingly for the absolute values of their coefficients of gender difference. The value of the coefficient of gender difference in the score on the index of ICT/Internet entertainment use controlled for: the father's and mother's occupation and level of education; the index of wealth of the respondent's household; the level of the respondent's household cultural capital; the respondent's migration background; the size of the community in which the respondent's school is located; whether the respondent attends a non-coeducational school; and the missing values. Source: The PISA 2006 dataset. Own calculations.

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Table 4.9. Gender differences in scores on the dependent variable regressed on the indicators of gender equality and country wealth

	τ_m	τ_n	τ_o	τ_p	τ_r
(Gender Gap Index) in 2006	-1.92* (0.93)	3.15** (0.92)	-1.03 (0.79)	2.73** (0.88)	-4.20*** (1.11)
log GDP per capita in 2006	0.07 (0.08)	0.00 (0.00)	0.03 (0.07)	0.14 (0.08)	0.04 (0.10)
Constant	0.20 (0.82)	-2.62*** (0.62)	0.11 (0.70)	-3.28*** (0.78)	1.31 (0.98)
Number of Observations	37	37	37	37	37
R-squared	0.11	0.27	0.05	0.38	0.32
Standard error of the estimate	0.27	0.29	0.23	0.26	0.33

* p≤0.05, ** p≤0.01, *** p≤0.001

Standard errors reported in parentheses.

Note: τ_m represents the values of coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's self-reported frequency of computer use at home.

τ_n represents the values of coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's self-reported frequency of computer use at places other than home or school.

τ_o represents the values of coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's score on the index of ICT/Internet educational use.

τ_p represents the values of coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's self-reported frequency of computer use for communication (e.g. e-mail or 'chat rooms').

τ_r represents the values of coefficients for the dummy variable girl in the model in which the dependent variable is operationalized as the respondent's score on the index of ICT/Internet entertainment use.

τ_m, τ_n, τ_o, τ_p, and τ_r are also the left-hand side variables in the least-squares regression analysis in which the value of women's emancipation index in 2006 (except for Qatar, for which the value is taken for 2007, and Macao and Serbia that are both missing on the value of the women's emancipation index) and the natural logarithm of the value of GDP per capita in 2006 are independent variables.

The constant is where the regression line intercepts the *y* axis, representing the amount the dependent variable *y* (gender gap) will be when the two independent variables are set to 0.

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5. The Unbearable Unimportance of Social Class: Geometric Data Analysis of Digital Skills Inequality among Adolescents in Six Societies

5.1. Introduction

The edifice of science is, if not built upon, then supported by the replication of analyses. It is the replication of research that either corroborates or disconfirms extant results. In the social sciences, the replication may concern either new sources of data or new methods or techniques of analyzing the data that have already been studied. The present chapter revisits a problem dealt with already chapter three: is social class related to the inequality in ICTs usage among adolescents living in contemporary, developed societies? Both chapters share the same empirical basis, i.e. they both use data coming from an ICTs Familiarity Questionnaire that was administered to fifteen year-olds in the framework of the 2006 PISA project. The two chapters, however, use different methods: this one, Multiple Correspondence Analysis (hereinafter MCA); the other, ordinary least squares regression, multiple logistic regression, and ordinal regression. Both approaches give similar – and perhaps counter-intuitive – results: social class does not translate into computer use inequality among adolescents in the countries under investigation.

This chapter is organized as follows. Section two is devoted to the theoretical considerations and asks research questions, section three (and Appendix 3) introduces Multiple Correspondence Analysis – the technique used in the study, while sections four, five, and six present the subsequent stages of the analysis. The last section outlines conclusions and answers the chapter's research questions.

5.2. Theoretical considerations and the research question

Technology understood as a material culture is one of the fundamental dimensions of social structure and social change (Castells 2000). Castells (2001d; 2004) and van Dijk (2005) argue that people who are unable to use ICTs such as computers and the Internet lack a cultural resource that is gaining increasing importance in the contemporary world. Both authors consider unequal access to ICTs to be a new and important form of social inequality. Castells argues that we are living in a new kind of social structure – a network society –

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constructed around networks activated by ICTs. Although not everybody is included in these networks, everyone is affected by the processes that take place therein. Since the core activities shaping and controlling human life (like transnational production, management, and the distribution of goods and services; science and technology; culture, art, and entertainment; politics; and warfare) are organized in global networks of interactive, multipurpose communication, access to these networks becomes crucial in determining one's position in the new social structure (Castells 2009: 24-25).

At first sight, focusing on adolescents while investigating the inequality of access to computers and the Internet might seem neither interesting nor essential. Young people, or as Tapscott (1998) puts it, 'digital natives,' tend to use ICTs without any difficulty and predominate among what Everett Rogers calls (1995) 'early adopters' of technological innovations. As the analysis reported in chapter three shows, with reference to parental social class membership, differences in computers usage among adolescents living in contemporary developed societies are small. Earlier studies, however, point to the persistence of digital usage inequality through other dimensions (like parental or one's own education, occupational status, income, race and ethnicity) among young ICTs users (see Warschauer 2003: 129-135, for the late 1990s case study on high school students in Hawaii; Mossberger et al. 2003, for the analysis based on the 2001 U.S. national telephone survey of people aged at least 21 years of age; Mossberger et al. 2008: 95-137, for the analysis of young people – defined as those below 32 years of age – based on October 2003 Current Population Survey; Peter and Valkenburg 2006, for the analysis based on the 2005 online survey of Dutch adolescents; Hargittai 2007, for the analysis of the 2006 survey of eighteen and nineteen year-olds attending the University of Illinois, Chicago; and Notten et al. 2009, for the hierarchical linear modeling analysis of 30 countries based on the PISA 2003 study). The existing research, therefore, seems inconclusive.

Even if, however, one accepts that digital usage inequality among adolescents living in contemporary developed societies is not a substantial social problem, as it does not apply to a large number of young people, one can still argue that those few adolescents who do fall behind their peers with respect to the actual ICTs use are *particularly* in danger of falling into what Castells (2001c: 165) metaphorically calls 'the black holes of informational capitalism' – *precisely because* they are a small minority within their age group. As such, they can easily be 'overlooked' as the potential targets of various local, regional, national, and international actions and measures aimed at creating the 'information society for all.' In other words, in this case the numerical weakness of the vulnerable category does not mean the lack of a

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problem, at least from the point of view of those very few individuals concerned. The method used in this chapter (see below) allows precisely for such vulnerable individuals to be distinguished and studies them within what Grusky and Weeden (2008) call the ‘multidimensional space of inequality.’

Following van Dijk (2005: 20), four kinds of access to computers and the Internet corresponding to four types of digital inequality have been distinguished: 1) motivational or psychological; 2) material or physical; 3) skills; and 4) usage. This chapter focuses only on usage access for three different reasons. Firstly, this chapter is intended as a follow-up study to the above-mentioned investigation of digital usage inequality among fifteen-year-olds in 39 developed societies. This study, reported in chapter three, found that the level of variance in the frequency of ICTs advanced (or program/software) use explained by parental social class membership or occupational background is low. Multiple Correspondence Analysis (a specific kind of Geometric Data Analysis) used in the present chapter allows for investigating where the individuals disadvantaged in terms of usage access are located within the social space of their respective societies; it also allows for making comparative research across countries. Secondly, the dataset used in this chapter contains information not only on respondents’ ICTs usage, but also on their self-perceived digital skills; since, however, the latter are not an optimal proxy for actual skills (Hargittai 2005), it is better to focus on something more ‘tangible’ and to study usage rather than skills access. (Unfortunately, the dataset does not contain information relating to the psychological aspects of digital inequality. Information on the inequality in physical access is used as the so-called supplementary or illustrative category in the analyses that follow.) Finally, usage access is nothing else than a form of cultural practice – and it is exactly the social differentiation of cultural practices that introduced Geometrical Data Analysis into sociology (Bourdieu 1984). Thus, this chapter is simply yet another exercise in a well-established stream of research. On the other hand, the added-value of the analysis reported in this chapter stems from the fact that – to the best of my knowledge – Multiple Correspondence Analysis has so far never been used for the study of any aspect of digital inequality.

For the reasons stated above, this chapter addresses three main questions:

1) Do adolescents having Internet access at home use computers more often than their peers who do not have Internet access at home?
2) Do boys use computers more often than girls?

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3) Does the social class of the respondent's father differentiate the frequency of the respondent's computer use?

The measure of social class is the Erikson-Goldthorpe schema (Erikson and Goldthorpe 1992: 38-39) comprising service workers, routine nonmanuals, petty bourgeoisie, skilled craft workers, unskilled manual workers, farmers, and agricultural workers. The ISCO-88 occupational codes are recoded to the Erikson-Goldthorpe schema according to the procedure detailed by Ganzeboom and Treiman (1996). Recoding reveals that there are no occupations corresponding to petty bourgeoisie in the dataset; hence, this social class is dropped from the analysis reported in the chapter. To avoid the undue influence of sparsely populated categories, social classes with less than ten respondents in a given country are not included in the estimations. This applies to Danish farmers with four respondents and Portuguese unskilled manual workers with one respondent; additionally, in the case of Portugal the social class of farmers with six respondents is merged with 207 respondents whose fathers are agricultural workers, giving for the purpose of analysis the category populated altogether by 213 respondents.

The analysis reported in this chapter diverges from the investigations reported previously in that it leaves out the influence of maternal social class on digital usage inequality among respondents. This is another limitation of the present study, justifiable only on the grounds that the inclusion of mother's social class would clutter the presentation of results unnecessarily and most likely would alter the findings in no substantive way.

This chapter investigates digital usage inequality among adolescents in developed societies only, that is, societies in which physical access to the Internet is not an elite phenomenon circumscribed to a small group of privileged individuals. To diversify the countries compared in the investigation, four of them represent different welfare state regimes identified by Ferrera (1996): Australia representing – for the lack of an appropriate European country in the dataset – the Anglo-Saxon regime, the Netherlands representing the Bismarckian regime, Denmark representing the Scandinavian regime, and Portugal representing the Southern regime. Additionally, two other countries are chosen for the study reported in this chapter. First, following the authors who argue in favor of distinguishing the East Asian welfare regime as a separate ideal type that deserves the examination of its own particularities (Goodman and Peng 1996; Jones 1990; Jones 1993; Midgley 1986), South Korea is included in the investigation precisely because she represents such a welfare regime. Second, following the arguments that also former Soviet bloc members deserve – because of

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their divergences from the ‘Western’ pattern – to be regarded separately in the study of welfare regimes (Standing 1996), Poland is included in the present investigation as well. The inclusion into the investigation of South Korea and Poland corrects for the Western bias of Ferrera’s typology. Furthermore, the choice of Korea and Poland is also informed by the results of the analyses previously reported in chapter three for social class (Korea only) and in chapter four for gender (Korea and Poland). In light of the evidence presented in these two chapters, both countries emerge as typical for their respective regimes (East-Asian and post-socialist)[64] with regard to the small effect of parental social class background on: adolescents’ odds of having the Internet access at home, adolescents’ level of confidence in doing high-level ICT tasks; and adolescents’ frequency of ICT program/software use. Both Korea and Poland are also typical for their regimes with regard to the negative effect of being a girl on the respondent’s frequency of computer use at home.

5.3. Multiple Correspondence Analysis

Geometric data analysis (GDA) is the approach to multivariate statistics developed in the 1960s by Benzécri (1992). Among other techniques, GDA includes Correspondence Analysis (CA) that is applicable for investigating two categorical variables, and Multiple Correspondence Analysis (MCA) that is applicable for studying more than two categorical variables. In France, both CA and MCA became standard for the analysis of questionnaires during the 1970s. As already mentioned, the work of Bourdieu contributed to the popularization of these techniques in sociology. In the English-speaking world, CA and MCA started gaining recognition with the publication of works by Greenacre (1984) and Lebart et al. (1984). For the general introduction to CA and a historical sketch of its application in the social sciences, see Blasius (1994), Murtagh (2005, 1-28), Rouanet et al. (2000), and van Meter et al. (1994). For getting acquainted with the basic concepts and properties of CA see Clausen (1998), Greenacre (1994, 2007), and Weller and Romney (1990). For a thorough introduction to MCA consult Le Roux and Rouanet (2004) and Rouanet (2006). For a short overview of MCA, relying on the work of Hjellbrekke et al. (2007, 269-272) and Le Roux and Rouanet (2010), see Appendix 3. For the application of MCA in social research, see

[64] The East-Asian regime is represented in this dissertation also by Japan and Macao; and the post-socialist regime is represented in this dissertation also by Bulgaria, Croatia, the Czech Republic, Hungary, Latvia, Lithuania, the Russian Federation, Serbia, Slovakia, and Slovenia.

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Bourdieu (1988, 1996, 2008); Hjellbrekke et al. (2007); Lebaron (2001); and Le Roux et al. (2008).

In fact, the origins of MCA can be traced back to Guttman's 1941 paper, in which he observes that social scientists are often confronted with a set of acts of a population of individuals that one would like to consider as a single class of behavior (in the current case, for example, respondents' self-reported frequency of using computers for different purposes). Social scientists are therefore interested in the cases where the acts are attributes recorded in the form of items with mutually exclusive categories (as in the present analysis: 'Never,' 'Once a month or less,' 'A few times a month,' 'Once or twice a week,' and 'Almost every day'). Thus, one is given the responses of a sample of the population of N individuals to a set of *q* items which have a common content that is desired to be thought as a single class of behavior. These responses can be represented by check marks as in the following table with hypothetical entries:

Table 5.1. An Exemplary Table with Hypothetical Entries

Category of an Answer to a Question	Individual						
	1	2	3	4	5	…	N
Never	✓					…	
Once a month or less		✓				…	
A few times a month			✓			…	
Once or twice a week				✓		…	✓
Almost every day					✓	…	

Source: Adapted from Guttman (1941: 321).

One would like to know, on the basis of one's knowledge of the behavior of a sample of individuals on a particular item, what the behavior of the population of individuals would be with respect to that particular item. To facilitate gaining such knowledge, Guttman proposed to quantify the class of attributes by deriving a single set of numerical values for the items.

Guttman characterizes his method of quantification of the class of attributes as, firstly, requiring no *a priori* judgments as to whether or not one act should be assigned a higher value than another. The desired values come out automatically by analyzing the behavior of all the individuals in the sample simultaneously, thus taking the entire configuration into account in one stroke. Secondly, the behavior of an individual is considered to be a

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distribution of the values of the acts the individual performs. Thus the entire variability of the individual's behavior is retained, be it consistent or inconsistent with that of the rest of the sample. Thirdly, a measure of the utility regarding the given set of acts as a single class of behavior for the given sample is made available. If this measure is too small for the set, then the concept the act is intended to quantify is proved not to be useful for the given sample. Lastly, from the behavior of a sample of individuals on a given act, a method is available for predicting in a best general manner what the behavior of other individuals outside the sample will be with respect to the act (Guttman 1941, 321-324).

The characteristics of the Guttman's method of the quantification of the class of attributes are retained by MCA. Explaining the principles of his own approach to data analysis, Benzécri writes:

> The model must follow the data, and not the other way around. This is another error in the application of mathematics to the human sciences: the abundance of models, which are built a priori and then confronted with the data by what one calls a 'test'. Often the 'test' is used to justify a model in which the number of parameters to be fitted is larger than the number of data points. And often it is used, on the contrary, to strongly reject as invalid the most judicial remarks of the experimenter. But *what we need is a rigorous method to extract structure, starting from the data*. (…) It is convenient to treat simultaneously information on as many dimensions as possible. As a consequence the problem of the validity of a 'test' – which, we admit, is sometimes troublesome – is not that important anymore. Nobody knows if the inequality 0.5 ≠ 0.7 must be interpreted in these practical cases as a certain empirical result, or if it is only a result of chance. But finding that in a space of two dimensions fifty points are approximately arranged on a circle is certainly a discovery (at least if the computing method does not deceive us!) (italics added – T. D.) (Benzécri 1973: 6, 9; quoted in Gifi 1981: 23-24).

Simplifying, one can say that MCA boils down to presenting a single set of numerical values for the items under study in the form of coordinates in the multidimensional geometric space, although in practice the results of MCA for a given individual on the particular item are presented as the pair of coordinates on a two-dimensional, Cartesian plane. In other words, MCA translates information from Table 5.1 into the Cartesian coordinate system in which axes represent two consecutive dimensions (the first and second one, the second and third one, etc.). MCA produces two clouds of points projected onto the first (second, third,

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etc.) principal, Cartesian plane: the cloud of categories and the cloud of individuals. In the latter points represent individuals and the location of an individual on the principal plane reflects the responses of the given individual. The distance between individual points reflect the dissimilarities between response patterns of individuals. Individuals who choose the same categories of an answer to a question (item) are represented by points at the same location.

A cloud of points (no matter whether representing categories or individuals) is like a geographic map with the *same distance scale in all directions*. A geometric diagram cannot be stretched or shrunk along one particular dimension. If for graphical purposes the diagram is enlarged or shrunk, the distance ratios between the points on a diagram should be unchanged.

A basic characteristic of a cloud of points is its dimensionality. In a two-dimensional cloud points lie in a plane. In MCA, the clouds of categories and of individuals have the same dimensionality. The full clouds are referred to their principal axes 1, 2, 3… ranked in decreasing order of importance. The contribution of point to axis is a statistic that depends both on the distance from the point to the origin point along the axis and on the weight of the point. The contributions of points to axes are the main aid to interpretation. The construction of the clouds is based on individuals, called active individuals, and variables, called active variables. Once the clouds are constructed, supplementary individuals may be put into the study and placed in the cloud of individuals. Similarly, supplementary variables may be added and their categories can be placed in the cloud of categories. Supplementary elements considerably enrich the interpretation of data (Le Roux and Rouanet 2010: 5-9).

A possible drawback to the MCA method is its sensitivity to the number of active variables used for the construction of the geometrical space of analysis. Among practitioners, the method is known for the instability of its results as more active variables are used in analysis. Although for the purpose of the present chapter such an additional analysis has not been conducted, the presence of a possible problem is nevertheless duly acknowledged and the reader is warned against the possible instability of the results presented below. The additional analysis should basically bring down to carrying out the same analysis as the one reported in this chapter, although with larger number of active variables (comparing also, for example – apart from five variables carrying information about the frequency of using computers for a specific purpose by the respondent, as in the current analysis – respondents' gender and the social class to which the respondent's father belongs).

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5.4. Construction of pertinent variables

Data concerning the variables used in this chapter are drawn from the 2006 PISA project. Details about the methodology underlying the PISA 2006 survey, as well as a comprehensive description of the OECD PISA 2006 international database are to be found in OECD (2009a; 2009b).

In each country under study, five variables are retained for the construction of the space. Each variable is a question about the frequency of using computers for a specific purpose by the respondent. The first variable is the question that asks: 'How often do you use computers for writing documents (e.g. with <Word> or <WordPerfect>)?' The second variable is the question that asks: 'How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3> or <Microsoft Excel>)?' The third variable is the question that asks: 'How often do you use computers for drawing, painting or using graphics programs?' The fourth variable is the question that asks: 'How often do you use computers for using educational software such as Mathematics programs?' And the last variable is the question that asks: 'How often do you use computers for writing computer programs?' In each question, the respondent could point to only one of five categorical answers, ranging from 'Never' to 'Almost every day.' In order to preserve the whole spectrum of answers, the infrequent categories (of frequencies less than 5%) are not pooled with others, which violates the rule of thumb suggested by Le Roux and Rouanet (2010: 39).[65] For each variable missing data are treated as the so-called passive categories which are ignored when defining the distance between individuals (see Tables 5.2-5.7).

The analysis refers to 13,497 active individuals in Australia, 4,267 active individuals in Denmark, 5,106 active individuals in Korea, 4,540 active individuals in the Netherlands, 5,383 active individuals in Poland, and 4,946 active individuals in Portugal. The choice of the

[65] The less frequent a category, the more it contributes to the overall variance. In Australia, there are four infrequent categories: 'Never' (2.19%) and 'Once a month or less' (4.44%) in the first variable, 'Almost every day' (3.51%) in the fourth variable, and 'Almost every day' (4.44%) in the fifth variable. In Denmark, there are four infrequent categories: 'Never' (2.43%) in the first variable, 'Almost every day' (3.07%) in the second variable, 'Almost every day' (2.23%) in the fourth variable, and 'Almost every day' (4.41%) in the fifth variable. In Korea, there are five infrequent categories: 'Almost every day' (4.31%) in the first variable, 'Almost every day' (1.97%) in the second variable, 'Almost every day' (3.46%) in the fourth variable, 'Once or twice a week' (4.54%) and 'Almost every day' (2.16%) in the fifth variable. In the Netherlands, there are three infrequent categories: 'Never' (1.91%) in the first variable, 'Almost every day' (3.78%) in the second variable, and 'Almost every day' (3.02%) in the fourth variable. Finally, in Portugal, there is one infrequent category: 'Never' (3.76%) in the first variable.

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number of axes to be interpreted is based on the decrease of eigenvalues (adjusted by the so-called Greenacre's formula, which gives a better assessment of the importance of axes than the raw eigenvalues (Rouanet 2006: 151)), the cumulated modified rates,[66] and the interpretability of axes (Le Roux and Rouanet 2010: 51). As Table 5.8 shows, for Australia the first adjusted eigenvalue is well separated from the second one; the difference between λ_1 and λ_2 being 58% of λ_1 ($[\lambda_1-\lambda_2]/\lambda_1 = [0.12-0.05]/0.12 = 0.58$), while the one between λ_2 and λ_3 being 60% of λ_2. After axis 4, eigenvalues decrease regularly and the differences are small. One obtains similar results for other countries under investigation as well. In turn, looking at the modified rates (also calculated using Greenacre's formula), one can see that two axes are sufficient for interpretation, because in each country under investigation they bring the rate of the explained variance above 90% (Table 5.9). Therefore, in what follows, only the first two axes are interpreted.

5.5. Interpretation of the first two axes

As Benzécri (1992: 405) writes: 'Interpreting an axis amounts to finding out what is similar, on the one hand, between all the elements figuring on the right of the origin and, on the other hand, between all that is written on the left; and expressing with conciseness and precision the contrast (or opposition) between the two extremes.' The same applies to finding out what is similar, on the one hand, between all the elements figuring above the origin and, on the other hand, between all that is written below.

In the analysis reported below, following Le Roux and Rouanet (2010: 52), the average contribution 100/25 = 4% is taken as a baseline criterion for retaining categories for interpretation of an axis.

[66] Greenacre's formula for the adjustment of the variance of axes (adjusted eigenvalues) is given, for each raw eigenvalue equal to or greater than 1/Q, by the equation: $\lambda_s^{adj} = [Q/(Q-1)]^2 * [\lambda_s^{raw} - (1-Q)]^2$, where s is the number of dimensions (axes) and Q is the number of variables retained for the construction of geometrical space. In turn, the modified rates are expressed as percentages of the values calculated by the following equation: modified rate = $[Q/(Q-1)] * [\lambda_s^{adj} - ((K-Q)/Q^2)]$, where K is defined as the overall number of categories and Q is defined as above (Greenacre 2006: 67-68).

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Australia

Axis 1 (λ_1= 0.473), see Table 5.10. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.1-5.5.[67]

There are eleven categories (belonging to five variables) that have contributions meeting criterion. Together they account for 82% of the variance of axis 1.

On the left, there are seven categories (60% of the variance of axis). They indicate using spreadsheets and educational software either once or twice a week or almost every day, and they indicate programming, using graphics, and writing documents almost every day. On the right, there are four categories (22% of the variance of axis). They indicate not using spreadsheets, educational software, programming, and graphics at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.378), see Table 5.11.

There are ten categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 66.3% of the variance of axis.

At the top, there are seven categories (53% of the variance of axis). They indicate using spreadsheets, educational software, programming, and graphics either almost every day or not using them at all. At the bottom, there are three categories (13.3% of the variance of axis) that indicate using spreadsheets and educational software a few times a month and writing documents once or twice a week.

To sum up, axis 2 separates very frequent use and non-use from the moderate use of computers.

Denmark

Axis 1 (λ_1=0.495), see Table 5.12. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.6-5.10.

There are eleven categories (belonging to five variables) that have contributions meeting criterion. They together account for 82.6% of the variance of axis 1.

On the left, there are eight categories (65.8% of the variance of axis). They indicate using educational software, spreadsheets, and programming either once or twice a week or

[67] Unfortunately, due to the limitations of Stata 11 used for conducting the analysis reported in this chapter, it is not possible to produce similar graphical representations of the clouds of individuals.

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almost every day, and they indicate using graphics and writing documents almost every day. On the right, there are three categories (16.8% of the variance of axis). They indicate not using educational software, spreadsheets, and graphics at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.392), see Table 5.13.

There are fourteen categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 87.7% of the variance of axis.

At the top, there are eight categories (53.7% of the variance of axis). They indicate using educational software, spreadsheets, and graphics either almost every day or not using them at all. They also indicate programming and writing documents almost every day. At the bottom, there are six categories (34% of the variance of axis) that indicate using educational software and programming either once a month or less or a few times a month; they also indicate using spreadsheets and graphics a few times a month.

To sum up, axis 2 separates very frequent use and non-use from the moderate use of computers.

Korea

Axis 1 (λ_1=0.482), see Table 5.14. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.11-5.15.

There are eleven categories (belonging to five variables) that have contributions meeting criterion. Together they account for 66.7% of the variance of axis 1.

On the left, there are six categories (27.1% of the variance of axis). They indicate using spreadsheets a few times a month or once or twice a week, programming a few times a month, using graphics once or twice a week, and writing documents once or twice a week or almost every day. On the right, there are five categories (39.6% of the variance of axis). They indicate not using spreadsheets, programming, graphics, educational software, and word processors at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.410), see Table 5.15.

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There are five categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 74.6% of the variance of axis. At the top, there are five categories that indicate using spreadsheets, writing documents, programming, using graphics, and educational software almost every day. There are no categories meeting criterion at the bottom.

To sum up, axis 2 separates very frequent use of computers from the other kind of use and the lack of use of computers.

The Netherlands

Axis 1 (λ_1=0.488), see Table 5.16. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.16-5.20.

There are twelve categories (belonging to five variables) that have contributions meeting criterion. Together they account for 86.3% of the variance of axis 1.

On the left, there are eight categories (62% of the variance of axis). They indicate using educational software, spreadsheets, and programming either once or twice a week or almost every day, and they indicate using graphics and writing documents almost every day. On the right, there are four categories (24.3% of the variance of axis). They indicate not using educational software, spreadsheets, programming, and graphics at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.382), see Table 5.17.

There are twelve categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 80.4% of the variance of axis.

At the top, there are six categories (46.3% of the variance of axis). They indicate using educational software and spreadsheets almost every day or not using them at all; they also indicate programming almost every day and not using graphics at all. At the bottom, there are six categories (34.1% of the variance of axis) that indicate using educational software and programming either once a month or less or a few times a month; they also indicate using spreadsheets and graphics a few times a month.

To sum up, axis 2 separates very frequent use and non-use from the moderate use of computers.

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Poland

Axis 1 (λ_1=0.553), see Table 5.18. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.21-5.25.

There are twelve categories (belonging to five variables) that have contributions meeting criterion. Together they account for 79.3% of the variance of axis 1.

On the left, there are eight categories (56.5% of the variance of axis). They indicate using educational software, spreadsheets, and programming either once or twice a week or almost every day, and they indicate using graphics and writing documents almost every day. On the right, there are four categories (22.8% of the variance of axis). They indicate not using educational software, spreadsheets, graphics, and programming at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.420), see Table 5.19.

There are thirteen categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 81% of the variance of axis.

At the top, there are nine categories (63.6% of the variance of axis). They indicate using spreadsheets, graphics, educational software, and writing documents almost every day or not using them at all; they also indicate programming almost every day. At the bottom, there are four categories (17.4% of the variance of axis) that indicate using spreadsheets, graphics, and educational software a few times a month; they also indicate writing documents once or twice a week.

To sum up, axis 2 separates very frequent use and non-use from the moderate use of computers.

Portugal

Axis 1 (λ_1=0.514), see Table 5.20. For a graphical representation of the categories retained for interpretation, presented in two-dimensional space for each active variable, see Figures 5.26-5.30.

There are nine categories (belonging to five variables) that have contributions meeting criterion. Together they account for 69.5% of the variance of axis 1.

On the left, there are seven categories (60.8% of the variance of axis). They indicate using educational software and programming either once or twice a week or almost every day, and they indicate using spreadsheets, graphics and writing documents almost every day.

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On the right, there are two categories (8.7% of the variance of axis). They indicate not using educational software and programming at all.

To sum up, axis 1 separates very frequent use of computers from the lack of use of computers.

Axis 2 (λ_2=0.412), see Table 5.21.

There are fourteen categories (belonging to five variables) that have contributions to axis 2 meeting criterion; they account for 84.2% of the variance of axis.

At the top, there are nine categories (60.9% of the variance of axis). They indicate using spreadsheets, educational software, graphics, and writing documents almost every day or not using them at all; they also indicate programming almost every day. At the bottom, there are five categories (23.2% of the variance of axis) that indicate using spreadsheets, graphics, and writing documents once or twice a week; they also indicate using educational software either a few times a month or once or twice a week.

To sum up, axis 2 separates very frequent use and non-use from the moderate use of computers.

Thus, the first examination reveals that in each country under investigation the geometric space of digital usage inequality among adolescents is identical, with axis 1 separating the very frequent use from the lack of use of computers, and axis 2 separating the very frequent use and the lack of use of computers from their moderate use. In all countries under study, these two axes explain over 90% of variance of the five variables used for the construction of the space of inequality. This stability and comprehensiveness of the preliminary results are the evidence that no category exerts unduly influence over the determination of axes in the geometric space of digital usage inequality among the age group under study. In other words, in the case at hand the violation of the above mentioned rule of thumb – stating that the infrequent categories should be pooled with those present in the sample with the frequency above the five percent threshold – does not skew the results of analysis. Furthermore, the findings reported in this section are a good empirical argument in favor of treating the results obtained for the five countries under investigation (which are, after all, so different) as applicable in other contemporary, developed societies.

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5.6. Exploration of the cloud of individuals

To answer the three research questions, the following nine dummy variables are introduced as supplementary variables. The first one indicates whether the respondent has Internet access at one's household, the second indicates the respondent's gender (0 = boy, 1=girl), the third one indicates that the respondent's father is out of the labor force (or that information on his occupation is missing), the fourth one indicates whether the respondent's father is a service worker, the fifth one indicates whether the respondent's father is a routine nonmanual worker, the sixth one indicates whether the respondent's father is a skilled craft worker, the seventh one indicates whether the respondent's father is an unskilled manual worker, the eighth one indicates whether the respondent's father is a farmer, and the ninth one indicates whether the respondent's father is an agricultural worker. The values of the variances of the first two axes (the raw eigenvalues) do not change in any country under investigation (compare the raw eigenvalues reported in Table 5.9 with the raw eigenvalues reported in the last row in Tables 5.22-5.27). Tables 5.22-5.27 show for each country under investigation the frequencies and coordinates on the first two axes of supplementary categories.

This chapter follows a rule of thumb stating that a scaled deviation between categories greater than 0.5 (in absolute value) is deemed to be 'notable,' and a scaled deviation greater than 1 (in absolute value) is deemed to be 'large' (Le Roux and Rouanet 2010: 59, 71).[68] It turns out that, following this rule, in no country under investigation there are any 'large' scaled deviations.

The 'notable' differences between categories include a difference of 0.54 on axis 2 between respondents whose fathers are out of the labor force and those whose fathers are farmers in Australia (with farmers' offspring closer to the 'moderate use of computers' end of spectrum, see Table 5.22); a gender difference of 0.52 on axis 1 in Denmark (with girls closer to the 'lack of use of computers' end of spectrum, see Table 5.23); a difference of 0.50 on axis 1 between respondents whose fathers are routine nonmanual workers and those whose fathers are unskilled manual workers in Denmark (with unskilled manual workers' offspring closer to the 'lack of use of computers' end of spectrum, see Table 5.23); a difference of 0.61 on axis 1 between respondents having and not having Internet access at their homes in Korea

[68] For example, in Australia, the scaled deviation on axis 2 between respondents whose fathers are outside the labour force and those whose fathers are farmers is equal to $d = [0.188 - (-0.143)]/\sqrt{0.378} = 0.54$ (see Table 5.22).

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(with have-nots closer to the 'lack of use of computers' end of spectrum, see Table 5.24); a difference of 0.61 on axis 1 between respondents whose fathers are out of the labor force and those whose fathers are farmers in the Netherlands (with farmers' offspring closer to the 'lack of use of computers' end of spectrum, see Table 5.25); a difference of 0.57 on axis 1 between respondents having and not having Internet access at their homes in Poland (with have-nots closer to the 'lack of use of computers' end of spectrum, see Table 5.26); a difference of 0.50 on axis 1 between respondents whose fathers are routine nonmanual workers and those whose fathers are agricultural workers in Poland (with agricultural workers' offspring closer to the 'lack of use of computers' end of spectrum, see Table 5.26); and a difference of 0.64 on axis 1 between respondents whose fathers are unskilled manual workers and those whose fathers are agricultural workers in Poland (again with agricultural workers' offspring closer to the 'lack of use of computers' end of spectrum, see Table 5.26). All of the above-mentioned differences are statistically significant at the two-sided level of 0.05. Statistical significance is established using the homogeneity test for a principal axis (Le Roux and Rouanet, 2010: 86).[69]

5.7. Conclusions

This chapter, based on the data collected in the framework of the 2006 PISA study in Australia, Denmark, the Netherlands, Poland, Portugal, and South Korea, investigates the causes of what van Dijk calls inequality in usage access to computers among fifteen-year-olds.

As the details of the above analysis show, social class – operationalized here according to the Erikson-Goldthorpe seven-class scheme – does not differentiate adolescents' frequency of what one may term advanced (program/software) ICTs use. Thus, one may

[69] To characterize the homogeneity of two categories, one considers the deviation between their mean points and takes a test statistic. With each possible pair of categories there is attached a mean difference $\bar{d}$, hence the permutation distribution of $\bar{d}$. For a principal axis of variance λ, the mean of the permutation distribution of $\bar{d}$ is 0 and the variance, denoted by V, is

$$V = \frac{N}{N-1}\frac{\lambda}{\tilde{n}}, \text{ with } \tilde{n} = \frac{1}{\frac{1}{n_1}+\frac{1}{n_2}},$$

where N is the sample size and n_1 and n_2 are the size of categories compared. The permutation distribution is fitted by a normal distribution with mean 0 and variance V. One considers the test statistic

$$Z = \frac{\bar{d}}{\sqrt{V}} = \sqrt{\tilde{n}}\sqrt{\frac{N-1}{N}}d$$

(with $d = \bar{d}/\sqrt{\lambda}$), which is approximately distributed as a standard normal variable (Le Roux and Rouanet, 2010: 85-86).

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conclude that among fifteen year-olds living in the countries under investigation paternal social class is not related to the inequality in the frequency of computer use. In other words, there is no reproduction of social class inequality (as defined above) into digital usage inequality among adolescents.

The other two possible sources of inequality in computer use considered in this chapter do not turn out to be serious problems, either. In Denmark, girls use computers 0.52 scaled standard deviation less frequently than boys. In the Netherlands, the respondents whose fathers are farmers use computers 0.61 scaled standard deviation less frequently than the respondents whose fathers are out of the labor force (or whose fathers' occupation is missing). Finally, in both Korea and Poland the respondents who do not have Internet access at home use computers less frequently than their peers who have physical access to the Internet at home. The difference is 0.61 scaled standard deviation in Korea and 0.57 scaled standard deviation in Poland. All of the above-mentioned differences are statistically significant and – in the MCA parlance – 'notable,' but not 'large.' Thus, while identifying 'digitally vulnerable' groups of adolescents, these results point out that digital usage inequality among adolescents in the societies under investigation is small. The information on which subgroups of adolescents are 'digitally disadvantaged,' however, is crucial for properly addressing intervention programs, provided that in Denmark, the Netherlands, Poland, and South Korea there is a political will and that there are resources available for carrying out such programs. As regards other countries under investigation, neither gender nor physical access to the Internet at home are related to the inequality in the frequency of advanced computer use among adolescents.

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Table 5.2. Australia (13,497 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	y_2	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	311	2.19	+1.176	0.013	+1.702	0.034
	Once a month or less	629	4.44	+0.917	0.016	+0.623	0.010
	A few times a month	2,832	19.99	+0.629	0.035	+0.117	0.002
	Once or twice a week	6,662	47.01	+0.067	0.001	-0.409	**0.044**
	Almost every day	3,214	22.68	-0.979	**0.096**	+0.461	0.026
	Missing data (p)	522	3.68				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	3,132	22.10	+0.787	**0.060**	+0.805	**0.078**
	Once a month or less	3,651	25.77	+0.401	0.019	-0.094	0.002
	A few times a month	3,704	26.14	-0.105	0.001	-0.546	**0.042**
	Once or twice a week	2,414	17.04	-0.777	**0.045**	-0.616	0.036
	Almost every day	720	5.08	-2.327	**0.121**	+1.849	**0.096**
	Missing data (p)	549	3.87				
How often do you use computers for drawing, painting or using graphics programs?	Never	2,740	19.34	+0.810	**0.055**	+0.833	**0.073**
	Once a month or less	2,768	19.53	+0.434	0.016	-0.142	0.002
	A few times a month	3,085	21.77	+0.016	0.000	-0.537	0.034
	Once or twice a week	3,174	22.40	-0.350	0.012	-0.548	0.037
	Almost every day	1,870	13.20	-1.262	**0.093**	+0.803	**0.047**
	Missing data (p)	533	3.76				
How often do you use computers for using educational software such as Mathematics programs?	Never	6,376	45.00	+0.567	**0.064**	+0.449	**0.050**
	Once a month or less	3,276	23.12	+0.042	0.000	-0.496	0.031
	A few times a month	2,161	15.25	-0.512	0.017	-0.753	**0.047**
	Once or twice a week	1,314	9.27	-1.068	**0.047**	-0.578	0.016
	Almost every day	498	3.51	-2.542	**0.099**	+2.296	**0.101**
	Missing data (p)	545	3.85				
How often do you use computers for writing computer programs?	Never	8,746	61.72	+0.390	**0.041**	+0.220	0.016
	Once a month or less	1,740	12.28	-0.059	0.000	-0.639	0.028
	A few times a month	1,403	9.90	-0.548	0.013	-0.846	0.039
	Once or twice a week	1,081	7.63	-1.048	0.036	-0.732	0.023
	Almost every day	629	4.44	-2.262	**0.099**	+1.856	**0.085**
	Missing data (p)	571	4.03				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 14,170 (673 individuals, or 4.75% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.3. Denmark (4,267 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	*y_2*	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	110	2.43	+0.797	0.007	+1.289	0.021
	Once a month or less	233	5.14	+0.650	0.009	+0.281	0.002
	A few times a month	1,421	31.35	+0.501	0.033	+0.044	0.000
	Once or twice a week	2,042	45.06	-0.085	0.001	-0.362	0.032
	Almost every day	566	12.49	-1.376	**0.098**	0.833	**0.046**
	Missing data (p)	160	3.53				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	1,423	31.40	+0.646	**0.055**	+0.720	**0.086**
	Once a month or less	1,125	24.82	+0.301	0.010	-0.311	0.013
	A few times a month	1,085	23.94	-0.229	0.006	-0.700	**0.062**
	Once or twice a week	585	12.91	-1.036	**0.058**	-0.405	0.011
	Almost every day	139	3.07	-2.899	**0.108**	+2.305	**0.086**
	Missing data (p)	175	3.86				
How often do you use computers for drawing, painting or using graphics programs?	Never	1,493	32.94	+0.649	**0.058**	+0.613	**0.066**
	Once a month or less	1,002	22.11	+0.272	0.007	-0.375	0.016
	A few times a month	911	20.10	-0.231	0.004	-0.752	**0.061**
	Once or twice a week	639	14.10	-0.649	0.024	-0.351	0.010
	Almost every day	338	7.46	-1.834	**0.104**	+1.111	**0.048**
	Missing data (p)	149	3.29				
How often do you use computers for using educational software such as Mathematics programs?	Never	2,147	47.37	+0.530	**0.055**	+0.538	**0.074**
	Once a month or less	1,027	22.66	+0.092	0.001	-0.639	**0.050**
	A few times a month	732	16.15	-0.536	0.020	-0.904	**0.070**
	Once or twice a week	356	7.86	-1.510	**0.075**	-0.285	0.003
	Almost every day	101	2.23	-3.062	**0.087**	+2.614	**0.080**
	Missing data (p)	169	3.73				
How often do you use computers for writing computer programs?	Never	3,099	68.38	+0.348	0.034	+0.195	0.014
	Once a month or less	481	10.61	-0.163	0.001	-0.944	**0.051**
	A few times a month	357	7.88	-0.684	0.016	-1.057	**0.046**
	Once or twice a week	229	5.05	-1.369	**0.040**	-0.285	0.002
	Almost every day	200	4.41	-2.174	**0.088**	+1.484	**0.051**
	Missing data (p)	166	3.66				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 4,532 (265 individuals, or 5.85% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.4. Korea (5,106 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	*y_2*	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	494	9.54	+1.231	**0.060**	+0.583	0.016
	Once a month or less	1,251	24.17	+0.526	0.027	-0.030	0.000
	A few times a month	1,847	35.68	-0.050	0.000	-0.295	0.016
	Once or twice a week	1,324	25.58	-0.622	**0.042**	-0.262	0.009
	Almost every day	223	4.31	-1.554	**0.043**	+2.873	**0.175**
	Missing data (p)	37	0.71				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	2,534	48.96	+0.676	**0.094**	+0.213	0.011
	Once a month or less	1,418	27.40	-0.257	0.007	-0.386	0.020
	A few times a month	716	13.83	-0.884	**0.045**	-0.555	0.020
	Once or twice a week	373	7.21	-1.323	**0.053**	-0.105	0.000
	Almost every day	102	1.97	-2.183	0.039	+4.399	**0.184**
	Missing data (p)	33	0.64				
How often do you use computers for drawing, painting or using graphics programs?	Never	1,989	38.43	+0.776	**0.096**	+0.290	0.016
	Once a month or less	1,326	25.62	-0.082	0.001	-0.377	0.017
	A few times a month	897	17.33	-0.581	0.024	-0.472	0.019
	Once or twice a week	661	12.77	-0.874	**0.040**	-0.343	0.008
	Almost every day	265	5.12	-1.267	0.035	+2.177	**0.119**
	Missing data (p)	38	0.73				
How often do you use computers for using educational software such as Mathematics programs?	Never	2,561	49.48	+0.652	**0.088**	+0.207	0.011
	Once a month or less	1,131	21.85	-0.361	0.012	-0.445	0.022
	A few times a month	734	14.18	-0.778	0.036	-0.492	0.017
	Once or twice a week	530	10.24	-0.848	0.030	-0.212	0.002
	Almost every day	179	3.46	-1.378	0.027	+2.488	**0.105**
	Missing data (p)	41	0.79				
How often do you use computers for writing computer programs?	Never	3,369	65.09	+0.457	**0.058**	+0.129	0.005
	Once a month or less	959	18.53	-0.480	0.017	-0.547	0.027
	A few times a month	462	8.93	-1.128	**0.048**	-0.585	0.016
	Once or twice a week	235	4.54	-1.428	0.039	-0.346	0.003
	Almost every day	112	2.16	-2.030	0.037	+3.886	**0.163**
	Missing data (p)	39	0.75				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 5,176 (70 individuals, or 1.35% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.5. The Netherlands (4,540 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	*y_2*	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	93	1.91	+0.752	0.004	+1.554	0.026
	Once a month or less	315	6.47	+0.660	0.011	+0.414	0.006
	A few times a month	1,426	29.28	+0.476	0.029	+0.060	0.000
	Once or twice a week	2,162	44.39	-0.101	0.001	-0.337	0.028
	Almost every day	687	14.10	-1.091	**0.072**	+0.535	0.021
	Missing data (p)	188	3.86				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	1,785	36.65	+0.630	**0.063**	+0.551	**0.061**
	Once a month or less	1,220	25.05	+0.198	0.004	-0.430	0.026
	A few times a month	960	19.71	-0.392	0.013	-0.732	**0.057**
	Once or twice a week	539	11.07	-1.041	**0.050**	-0.295	0.005
	Almost every day	184	3.78	-2.496	**0.099**	+2.108	**0.091**
	Missing data (p)	183	3.76				
How often do you use computers for drawing, painting or using graphics programs?	Never	1,641	33.69	+0.669	**0.064**	+0.642	**0.076**
	Once a month or less	992	20.37	+0.222	0.004	-0.552	0.034
	A few times a month	905	18.58	-0.234	0.004	-0.701	**0.049**
	Once or twice a week	673	13.82	-0.628	0.023	-0.329	0.008
	Almost every day	488	10.02	-1.422	**0.086**	+0.707	0.028
	Missing data (p)	172	3.53				
How often do you use computers for using educational software such as Mathematics programs?	Never	2,395	49.17	+0.552	**0.064**	+0.443	**0.053**
	Once a month or less	1,088	22.34	-0.021	0.000	-0.779	**0.073**
	A few times a month	732	15.03	-0.585	0.021	-0.795	**0.052**
	Once or twice a week	322	6.61	-1.456	**0.059**	+0.022	0.000
	Almost every day	147	3.02	-2.891	**0.105**	+2.438	**0.095**
	Missing data (p)	187	3.84				
How often do you use computers for writing computer programs?	Never	3,082	63.27	+0.438	**0.052**	+0.200	0.015
	Once a month or less	616	12.65	-0.182	0.001	-0.983	**0.066**
	A few times a month	408	8.38	-0.696	0.017	-0.984	**0.044**
	Once or twice a week	297	6.10	-1.267	**0.042**	-0.251	0.002
	Almost every day	275	5.65	-2.120	**0.107**	+1.686	**0.087**
	Missing data (p)	193	3.96				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 4,871 (331 individuals, or 6.80% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.6. Poland (5,383 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	y_2	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	663	11.95	+0.937	0.039	+1.100	**0.069**
	Once a month or less	897	16.17	+0.731	0.032	+0.115	0.002
	A few times a month	1,449	26.12	+0.307	0.009	-0.426	0.023
	Once or twice a week	1,700	30.65	-0.427	0.020	-0.531	**0.042**
	Almost every day	745	13.43	-1.336	**0.087**	+0.933	**0.057**
	Missing data (p)	93	1.68				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	1,174	21.16	+0.873	**0.059**	+0.869	**0.077**
	Once a month or less	1,443	26.01	+0.411	0.016	-0.210	0.006
	A few times a month	1,412	25.46	+0.002	0.000	-0.574	**0.040**
	Once or twice a week	1,049	18.91	-0.868	**0.052**	-0.475	0.020
	Almost every day	377	6.80	-1.910	**0.090**	+1.571	**0.080**
	Missing data (p)	92	1.66				
How often do you use computers for drawing, painting or using graphics programs?	Never	871	15.70	+0.981	**0.055**	+0.952	**0.069**
	Once a month or less	1,326	23.90	+0.604	0.032	-0.151	0.003
	A few times a month	1,253	22.59	+0.085	0.000	-0.674	**0.049**
	Once or twice a week	1,212	21.85	-0.622	0.031	-0.469	0.023
	Almost every day	788	14.21	-1.272	**0.085**	+0.988	**0.068**
	Missing data (p)	97	1.75				
How often do you use computers for using educational software such as Mathematics programs?	Never	1,359	24.50	+0.807	**0.059**	+0.754	**0.068**
	Once a month or less	1,409	25.40	+0.412	0.016	-0.280	0.009
	A few times a month	1,293	23.31	-0.120	0.001	-0.614	**0.043**
	Once or twice a week	1,034	18.64	-0.883	**0.054**	-0.360	0.012
	Almost every day	346	6.24	-1.792	**0.074**	+1.536	**0.071**
	Missing data (p)	106	1.91				
How often do you use computers for writing computer programs?	Never	2,385	43.00	+0.590	**0.055**	+0.325	0.022
	Once a month or less	1,039	18.73	+0.242	0.004	-0.506	0.023
	A few times a month	793	14.30	-0.254	0.004	-0.683	0.032
	Once or twice a week	755	13.61	-0.937	**0.044**	-0.469	0.014
	Almost every day	479	8.64	-1.582	**0.079**	+1.356	**0.077**
	Missing data (p)	96	1.73				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 5,547 (164 individuals, or 2.96% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.7. Portugal (4,946 active individuals). Five active variables, twenty five active categories, and five passive categories indicated by p (the missing data) with their absolute frequencies and percentages (the left part of a subtable)

Variable	Category	Frequency	%	Axis 1		Axis 2	
				y_1	*Ctr*	y_2	*Ctr*
How often do you use computers for writing documents (e.g. with <Word or WordPerfect>)?	Never	192	3.76	+1.016	0.015	+1.882	**0.065**
	Once a month or less	363	7.11	+0.879	0.022	+0.596	0.012
	A few times a month	1,049	20.53	+0.622	0.032	+0.009	0.000
	Once or twice a week	2,466	48.27	-0.004	0.000	-0.488	**0.058**
	Almost every day	917	17.95	-1.256	**0.113**	+0.676	**0.041**
	Missing data (p)	122	2.39				
How often do you use computers for using spreadsheets (e.g. with <Lotus 1 2 3 or Microsoft Excel>)?	Never	872	17.07	+0.731	0.036	+1.034	**0.090**
	Once a month or less	1,157	22.65	+0.556	0.028	+0.037	0.000
	A few times a month	1,267	24.80	+0.201	0.004	-0.514	0.033
	Once or twice a week	1,311	25.66	-0.614	0.039	-0.618	**0.048**
	Almost every day	376	7.36	-1.953	**0.112**	+1.377	**0.070**
	Missing data (p)	126	2.47				
How often do you use computers for drawing, painting or using graphics programs?	Never	685	13.41	+0.818	0.036	+1.110	**0.083**
	Once a month or less	979	19.16	+0.711	0.039	+0.063	0.000
	A few times a month	1,087	21.28	+0.286	0.007	-0.488	0.025
	Once or twice a week	1,640	32.10	-0.442	0.025	-0.536	**0.045**
	Almost every day	597	11.69	-1.412	**0.092**	+0.990	**0.056**
	Missing data (p)	121	2.37				
How often do you use computers for using educational software such as Mathematics programs?	Never	1,438	28.15	+0.653	**0.047**	+0.721	**0.073**
	Once a month or less	1,200	23.49	+0.455	0.020	-0.159	0.003
	A few times a month	1,031	20.18	-0.013	0.000	-0.633	**0.041**
	Once or twice a week	1,038	20.32	-0.825	**0.056**	-0.633	**0.041**
	Almost every day	274	5.36	-2.254	**0.109**	+1.698	**0.076**
	Missing data (p)	128	2.51				
How often do you use computers for writing computer programs?	Never	2,780	54.41	+0.429	**0.040**	+0.252	0.017
	Once a month or less	702	13.74	+0.171	0.001	-0.422	0.012
	A few times a month	553	10.82	-0.221	0.003	-0.784	0.033
	Once or twice a week	654	12.80	-1.032	**0.054**	-0.570	0.020
	Almost every day	289	5.66	-1.789	**0.072**	+1.394	**0.055**
	Missing data (p)	131	2.56				

Results of the specific MCA for the first two axes (the right part of a subtable). For each axis, coordinates (y) and contributions (Ctr) of active categories (**in bold**, contributions of categories retained for interpretation). The total number of individuals in the dataset is 5,109 (163 individuals, or 3.19% of the sample, are missing and thus excluded from MCA).

Data source (for each country in this file, left part): "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\08-01-2011.smcl". For each country y_1 and y_2 taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\mchapter-mca_6_cnts_10-01-2011.smcl" - raw contributions as well, but divided by the square root of the eigenvalues (stored in "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles").

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Table 5.8. Adjusted variances of axes (adjusted eigenvalues, adjusted λ) and cumulated modified rates		
	Adjusted Variances of Axes (Adjusted Eigenvalues, Adjusted λ)	Cumulated Modified Rates
Australia		
Axis 1	0.12	0.854
Axis 2	0.05	0.938
Axis 3	0.02	0.977
Axis 4	0.01	0.991
Axis 5	2.96E-05	0.999
Axis 6	3.04E-05	1
Denmark		
Axis 1	0.14	0.830
Axis 2	0.06	0.928
Axis 3	0.02	0.971
Axis 4	0.01	0.983
Axis 5	3.31E-05	0.999
Axis 6	9.18E-06	1
Korea		
Axis 1	0.12	0.844
Axis 2	0.07	0.914
Axis 3	0.03	0.966
Axis 4	0.01	1
The Netherlands		
Axis 1	0.13	0.839
Axis 2	0.05	0.935
Axis 3	0.02	0.978
Axis 4	0.01	0.990
Axis 5	8.18E-05	0.999
Axis 6	1.82E-06	1
Poland		
Axis 1	0.19	0.757
Axis 2	0.08	0.905
Axis 3	0.03	0.959
Axis 4	0.01	0.986
Axis 5	0.0001	0.999
Axis 6	7.20E-07	1
Portugal		
Axis 1	0.15	0.807
Axis 2	0.07	0.912
Axis 3	0.03	0.963
Axis 4	0.01	0.987
Axis 5	0.0001	0.999
Axis 6	8.56E-06	1
Note:		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\Greenacres_formula_10-01-2011.xls".

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Table 5.9. Variances of Axes, Modified Rates, and Cumulated Rates		
	Axis 1	Axis 2
Australia		
Variances of axes (eigenvalues, λ)	0.473	0.378
Modified rates	85%	9%
Cumulated modified rates	94%	
Denmark		
Variances of axes (eigenvalues, λ)	0.495	0.392
Modified rates	83%	10%
Cumulated modified rates	93%	
Korea		
Variances of axes (eigenvalues, λ)	0.482	0.410
Modified rates	84%	7%
Cumulated modified rates	91%	
The Netherlands		
Variances of axes (eigenvalues, λ)	0.488	0.382
Modified rates	84%	10%
Cumulated modified rates	94%	
Poland		
Variances of axes (eigenvalues, λ)	0.553	0.420
Modified rates	76%	15%
Cumulated modified rates	91%	
Portugal		
Variances of axes (eigenvalues, λ)	0.514	0.412
Modified rates	81%	10%
Cumulated modified rates	91%	
Note: The variances of axes (eigenvalues, λ) reported in this table are the raw eigenvalues and thus their values are different from the values of the variances of axes adjusted by Greenacre's formula (adjusted eigenvalues, adjusted λ) that are reported in Table 5.8.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\Greenacres_formula_10-01-2011.xls".

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Table 5.10. Interpretation of axis 1 for Australia: 5 variables, 11 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Spreadsheets	24.6	Once or twice a week+ Almost every day	Neve r	4.5+12.1	6.0
Using Educational Software	22.7	Once or twice a week+ Almost every day	Neve r	4.7+9.9	6.4
Programming	18.9	Almost every day	Neve r	9.9	4.1
Using Graphics	17.6	Almost every day	Neve r	9.3	5.5
Writing Documents	16.1	Almost every day		9.6	
Total				60	22
				82	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ AUS_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Australia” folder (graphs).

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Table 5.11. Interpretation of axis 2 for Australia: 5 variables, 10 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Spreadsheets	24.6	Never+ Almost every day	A few times a month	7.8+9.6	4.2
Using Educational Software	22.7	Never+ Almost every day	A few times a month	5.0+10.1	4.7
Programming	19.0	Almost every day		8.5	
Using Graphics	17.6	Never+ Almost every day		7.3+4.7	
Writing Documents	16.1		Once or twice a week		4.4
Total				53	13.3
				66.3	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ AUS_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Australia” folder (graphs).

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Table 5.12. Interpretation of axis 1 for Denmark: 5 variables, 11 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Educational Software	23.9	Once or twice a week+ Almost every day	Never	7.5+8.7	5.5
Using Spreadsheets	23.7	Once or twice a week+ Almost every day	Never	5.8+10.8	5.5
Using Graphics	19.8	Almost every day	Never	10.4	5.8
Programming	17.9	Once or twice a week+ Almost every day		4.0+8.8	
Writing Documents	14.8	Almost every day		9.8	
Total				65.8	16.8
				82.6	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ DK_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Denmark" folder (graphs).

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Table 5.13. Interpretation of axis 2 for Denmark: 5 variables, 14 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Educational Software	27.6	Never+ Almost every day	Once/month or less+ A few times a month	7.4+8.0	5.0+7.0
Using Spreadsheets	25.9	Never+ Almost every day	A few times a month	8.6+8.6	6.2
Using Graphics	20.0	Never+ Almost every day	A few times a month	6.6+4.8	6.1
Programming	16.5	Almost every day	Once/month or less+ A few times a month	5.1	5.1+4.6
Writing Documents	10.1	Almost every day		4.6	
Total				53.7	34
				87.7	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ DK_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Denmark” folder (graphs).

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Table 5.14. Interpretation of axis 1 for Korea: 5 variables, 11 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Spreadsheets	23.8	A few times a month+ Once or twice a week	Never	4.5+5.3	9.4
Programming	19.9	A few times a month	Never	4.8	5.8
Using Graphics	19.7	Once or twice a week	Never	4.0	9.6
Using Educational Software	19.3		Never		8.8
Writing Documents	17.3	Once or twice a week+ Almost every day	Never	4.2+4.3	6.0
Total				27.1	39.6
				66.7	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ Korea_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Korea” folder (graphs).

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Table 5.15. Interpretation of axis 2 for Korea: 5 variables, 5 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Spreadsheets	23.6	Almost every day		18.4	
Writing Documents	21.6	Almost every day		17.5	
Programming	21.3	Almost every day		16.3	
Using Graphics	17.8	Almost every day		11.9	
Using Educational Software	15.6	Almost every day		10.5	
Total				53.7	
				74.6	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ Korea_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Korea" folder (graphs).

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Table 5.16. Interpretation of axis 1 for the Netherlands: 5 variables, 12 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Educational Software	24.9	Once or twice a week+ Almost every day	Neve r	5.9+10.5	6.4
Using Spreadsheets	22.9	Once or twice a week+ Almost every day	Neve r	5.0+9.9	6.3
Programming	21.9	Once or twice a week+ Almost every day	Neve r	4.2+10.7	5.2
Using Graphics	18.2	Almost every day	Neve r	8.6	6.4
Writing Documents	11.7	Almost every day		7.2	
Total				62.0	24.3
				86.3	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ NL_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Netherlands" folder (graphs).

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Table 5.17. Interpretation of axis 2 for the Netherlands: 5 variables, 12 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Educational Software	27.3	Never+ Almost every day	Once/month or less+ A few times a month	5.3+9.5	7.3+5.2
Using Spreadsheets	23.9	Never+ Almost every day	A few times a month	6.1+9.1	5.7
Programming	21.4	Almost every day	Once/month or less+ A few times a month	8.7	6.6+4.4
Using Graphics	19.4	Never	A few times a month	7.6	4.9
Writing Documents	8.1				
Total				46.3	34.1
				80.4	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ NL_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Netherlands” folder (graphs).

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Table 5.18. Interpretation of axis 1 for Poland: 5 variables, 12 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Educational Software	20.4	Once or twice a week+ Almost every day	Never	5.4+7.4	5.9
Using Spreadsheets	21.8	Once or twice a week+ Almost every day	Never	5.2+9.0	5.9
Using Graphics	20.3	Almost every day	Never	8.5	5.5
Writing Documents	18.8	Almost every day		8.7	
Programming	18.7	Once or twice a week+ Almost every day	Never	4.4+7.9	5.5
Total				56.5	22.8
				79.3	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ PL_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Poland" folder (graphs).

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Table 5.19. Interpretation of axis 2 for Poland: 5 variables, 13 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Spreadsheets	22.4	Never+ Almost every day	A few times a month	7.7+8.0	4.0
Using Graphics	21.3	Never+ Almost every day	A few times a month	6.9+6.8	4.9
Using Educational Software	20.4	Never+ Almost every day	A few times a month	6.8+7.1	4.3
Writing Documents	19.3	Never+ Almost every day	Once or twice a week	6.9+5.7	4.2
Programming	16.8	Almost every day		7.7	
Total				63.6	17.4
				81.0	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ PL_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Poland" folder (graphs).

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Table 5.20. Interpretation of axis 1 for Portugal: 5 variables, 9 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)					
Variables	Ctr of variables	Categories		Ctr of categories	
		Left	Right	Left	Right
Using Educational Software	23.1	Once or twice a week+ Almost every day	Neve r	5.6+10.9	4.7
Using Spreadsheets	21.9	Almost every day		11.2	
Using Graphics	19.9	Almost every day		9.2	
Writing Documents	18.3	Almost every day		11.3	
Programming	17.1	Once or twice a week+ Almost every day	Neve r	5.4+7.2	4.0
Total				60.8	8.7
				69.50	

Data for "Ctr of variables" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ PT_cntrs_ala_LeRoux_10-01-2011.xls".
Data for "Ctr of categories" taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl" and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Portugal" folder (graphs).

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Table 5.21. Interpretation of axis 2 for Portugal: 5 variables, 14 categories most contributing to axis. Variables are ranked according to decreasing contributions (in %)

Variables	Ctr of variables	Categories		Ctr of categories	
		Up	Down	Up	Down
Using Spreadsheets	24.2	Never+ Almost every day	Once or twice a week	9.0+7.0	4.8
Using Educational Software	23.4	Never+ Almost every day	A few times a month+ Once or twice a week	7.3+7.6	4.1+4.1
Using Graphics	20.9	Never+ Almost every day	Once or twice a week	8.3+5.6	4.5
Writing Documents	17.6	Never+ Almost every day	Once or twice a week	6.5+4.1	5.8
Programming	13.7	Almost every day		5.5	
Total				60.9	23.3
				84.20	

Data for “Ctr of variables” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\ExcelFiles\ PT_cntrs_ala_LeRoux_10-01-2011.xls”.
Data for “Ctr of categories” taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\13-01-2011.smcl” and “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Portugal” folder (graphs).

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Table 5.22. Supplementary variables for Australia: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)			
		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	1,323	-0.023	0.114
R has Internet access at home	12,174	0.002	-0.012
Girl	6,716	0.066	0.014
Boy	6,781	-0.066	-0.014
R's father out of labour force	1,221	-0.052	0.188
R's father service class	5,963	-0.014	-0.036
R's father routine nonmanual worker	572	0.101	-0.042
R's father skilled craft worker	5,026	0.006	0.013
R's father unskilled manual worker	10	0.232	0.119
R's father farmer	279	0.046	-0.143
R's father agricultural worker	426	0.098	-0.044
Total variance of the axis (λ)		0.473	0.378
Notes: Number of active individuals 13,497.			

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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Table 5.23. Supplementary variables for Denmark: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)			
		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	214	0.165	0.120
R has Internet access at home	4,053	-0.009	-0.006
Girl	2,195	0.177	0.050
Boy	2,072	-0.188	-0.053
R's father out of labour force	777	0.039	0.006
R's father service class	1,430	-0.019	-0.019
R's father routine nonmanual worker	312	-0.023	-0.035
R's father skilled craft worker	1,562	-0.008	0.021
R's father unskilled manual worker	17	0.331	0.009
R's father farmer	4	-	-
R's father agricultural worker	165	0.062	0.015
Total variance of the axis (λ)		0.495	0.392
Notes: Number of active individuals 4,267. Because it is sparsely populated, the category of farmers is not included in the estimations.			

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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Table 5.24. Supplementary variables for Korea: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)			
		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	184	0.405	0.152
R has Internet access at home	4,922	-0.015	-0.006
Girl	2,535	-0.006	-0.019
Boy	2,571	0.006	0.019
R's father out of labour force	173	-0.039	0.008
R's father service class	2,560	-0.044	-0.000
R's father routine nonmanual worker	788	-0.015	-0.018
R's father skilled craft worker	1,322	0.078	0.021
R's father unskilled manual worker	0	-	-
R's father farmer	168	0.096	-0.107
R's father agricultural worker	95	0.127	0.039
Total variance of the axis (λ)		0.482	0.410
Notes: Number of active individuals 5,106.			

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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Table 5.25. Supplementary variables for the Netherlands: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)			
		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	116	0.056	0.206
R has Internet access at home	4,424	-0.001	-0.005
Girl	2,209	0.100	-0.016
Boy	2,331	-0.095	0.015
R's father out of labour force	287	-0.159	0.210
R's father service class	2,192	0.018	-0.058
R's father routine nonmanual worker	500	-0.032	-0.038
R's father skilled craft worker	1,403	0.002	0.058
R's father unskilled manual worker	0	-	-
R's father farmer	90	0.269	0.000
R's father agricultural worker	68	-0.052	0.064
Total variance of the axis (λ)		0.488	0.382
Notes: Number of active individuals 4,540.			

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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Table 5.26. Supplementary variables for Poland: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)

		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	2,566	0.220	0.034
R has Internet access at home	2,817	-0.201	-0.031
Girl	2,745	0.171	-0.044
Boy	2,638	-0.178	0.046
R's father out of labour force	488	0.016	0.098
R's father service class	1,474	-0.032	-0.052
R's father routine nonmanual worker	232	-0.234	-0.022
R's father skilled craft worker	2,529	0.007	0.013
R's father unskilled manual worker	23	-0.336	-0.221
R's father farmer	10	-0.160	0.001
R's father agricultural worker	627	0.139	0.008
Total variance of the axis (λ)		0.553	0.420

Notes: Number of active individuals 5,383.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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Table 5.27. Supplementary variables for Portugal: coordinates of the mean points on the first two axes for physical access to the Internet, gender, and social class membership of the respondent's father (six + 'out of labor force' categories)

		Mean point coordinates	
	Weight	Axis 1	Axis 2
No Internet access at home	2,018	0.065	0.064
R has Internet access at home	2,913	-0.045	-0.045
Girl	2,600	0.059	-0.021
Boy	2,346	-0.065	0.023
R's father out of labour force	458	-0.061	0.067
R's father service class	1,006	0.071	0.013
R's father routine nonmanual worker	604	-0.018	0.008
R's father skilled craft worker	2,665	-0.015	-0.016
R's father unskilled manual worker	1	-	-
R's father farmer or agricultural worker	213	0.053	-0.013
Total variance of the axis (λ)		0.514	0.412

Notes: Number of active individuals 4,946. Because they are sparsely populated, the category of unskilled manual workers (one respondent) is not included in the estimations, and the category of farmers (six respondents) is collapsed with the category of agricultural workers (207 respondents) into one category of 213 respondents.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\LogFiles\21-06-2011.smcl"
and "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\DoFiles\mchapter-mca_suppl_6_cnts_21-06-2011.do"

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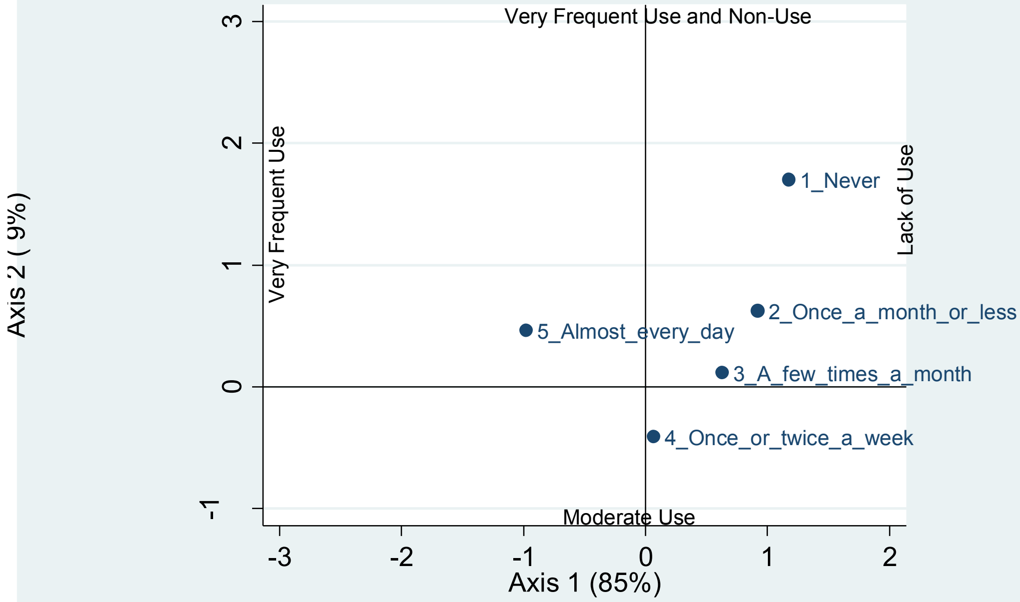
European University Institute DOI: 10.2870/46469

Figure 5.1. MCA Coordinate Plot of Writing Documents

For Australia

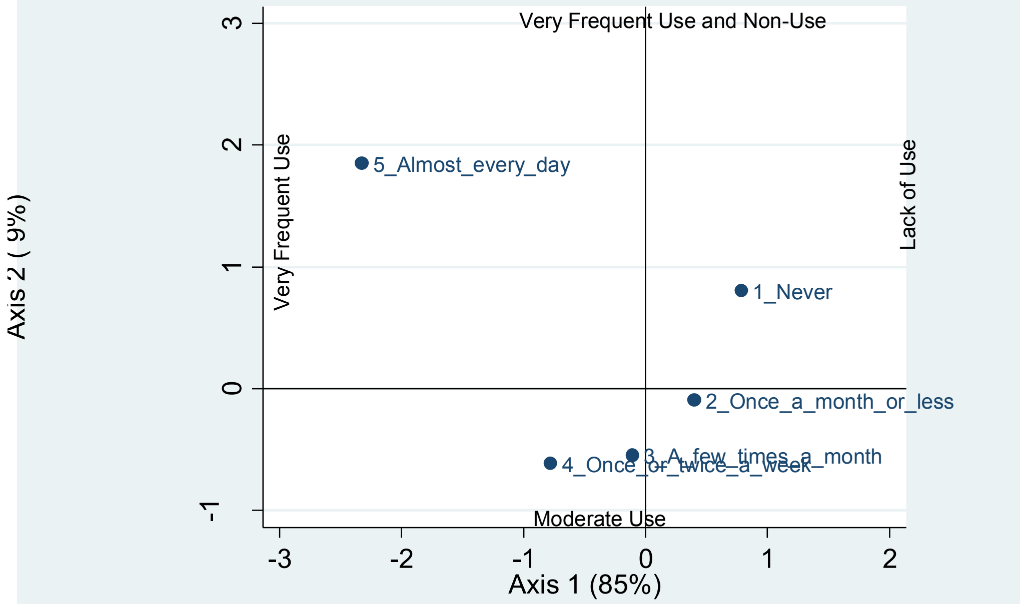


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Australia-05-04-2012" folder.

Figure 5.2. MCA Coordinate Plot of Using Spreadsheets

For Australia



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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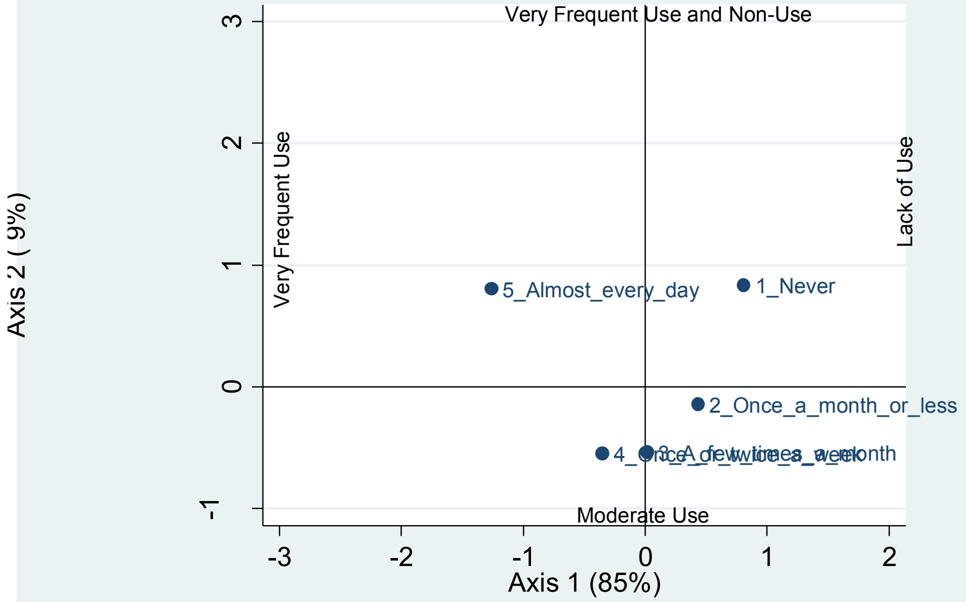
Figure 5.3. MCA Coordinate Plot of Using Graphics

For Australia

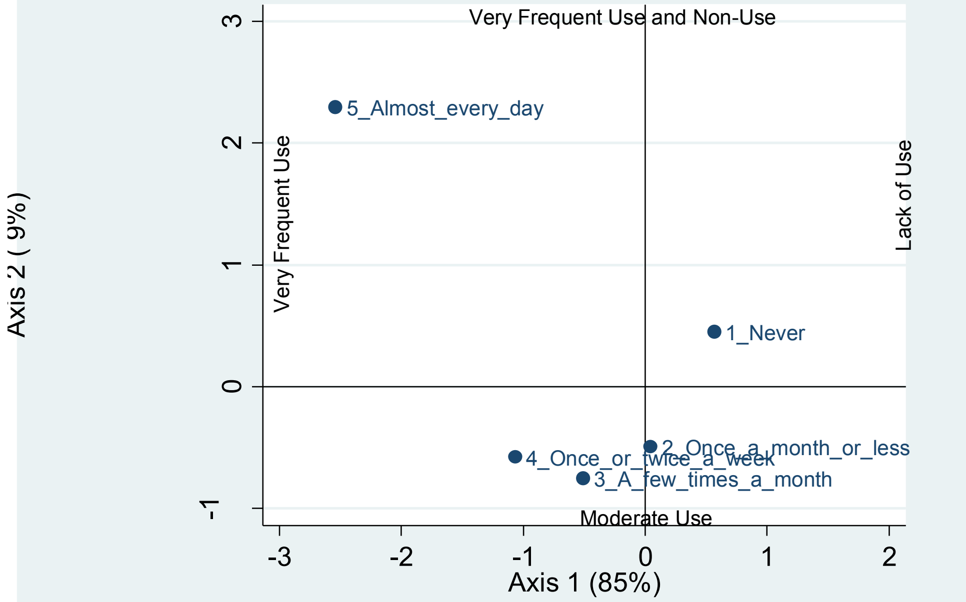


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Australia-05-04-2012" folder.

Figure 5.4. MCA Coordinate Plot of Using Educational Software

For Australia



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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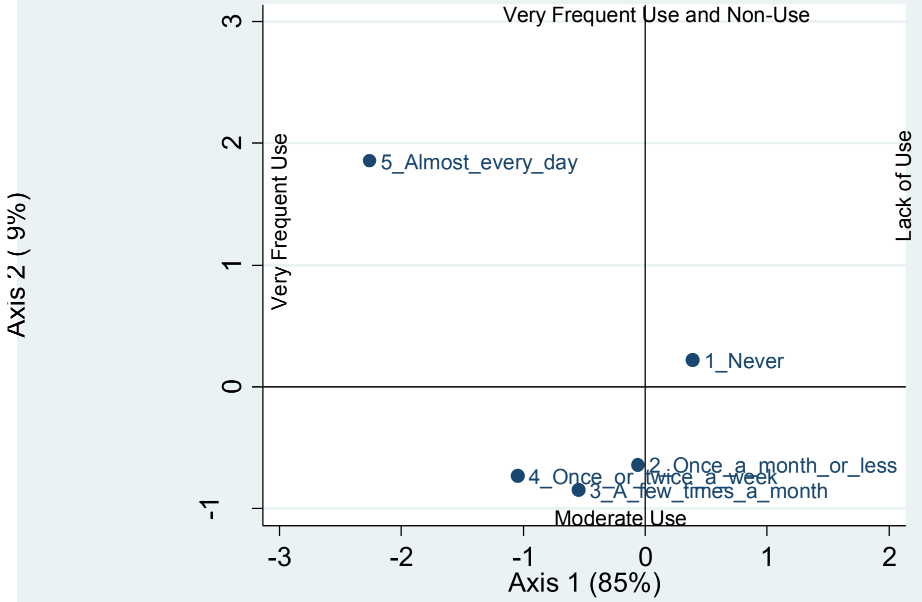
Figure 5.5. MCA Coordinate Plot of Programming

For Australia

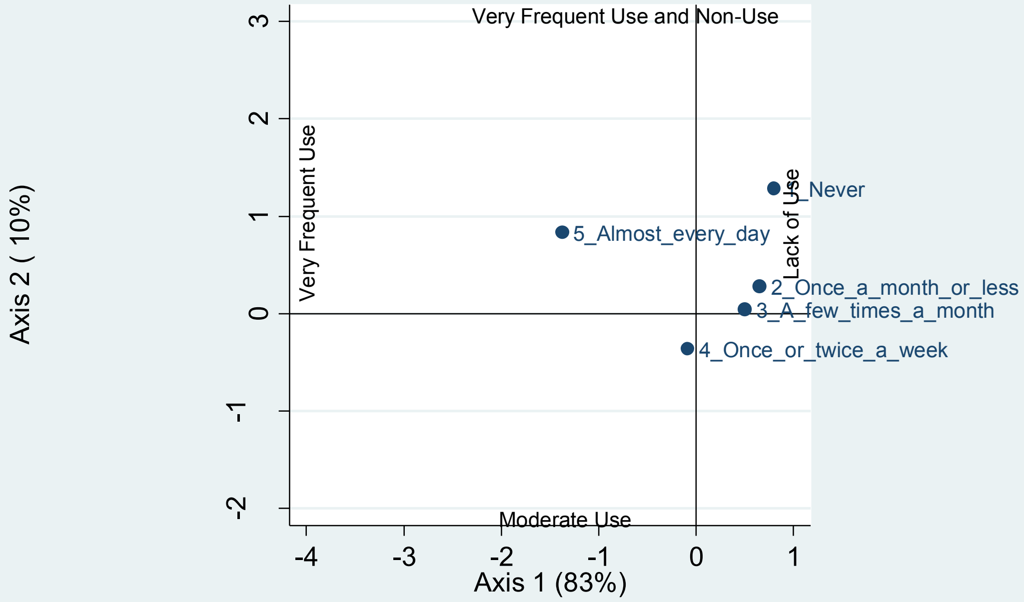


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Australia-05-04-2012” folder.

Figure 5.6. MCA Coordinate Plot of Writing Documents

For Denmark



Note: Coordinates in principal normalization. Source: The PISA 2006. Own calculations.

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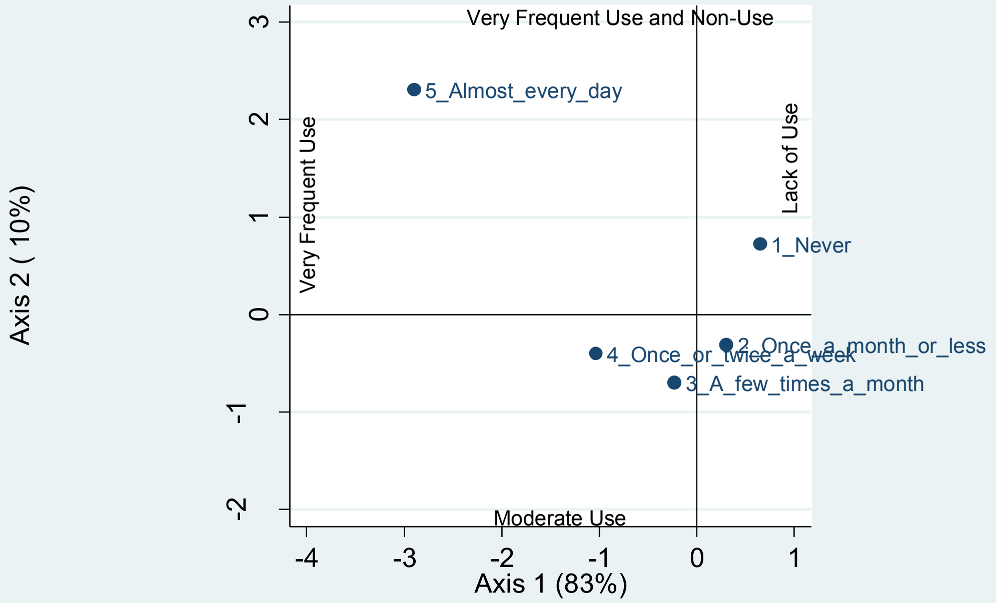
Figure 5.7. MCA Coordinate Plot of Using Spreadsheets

For Denmark

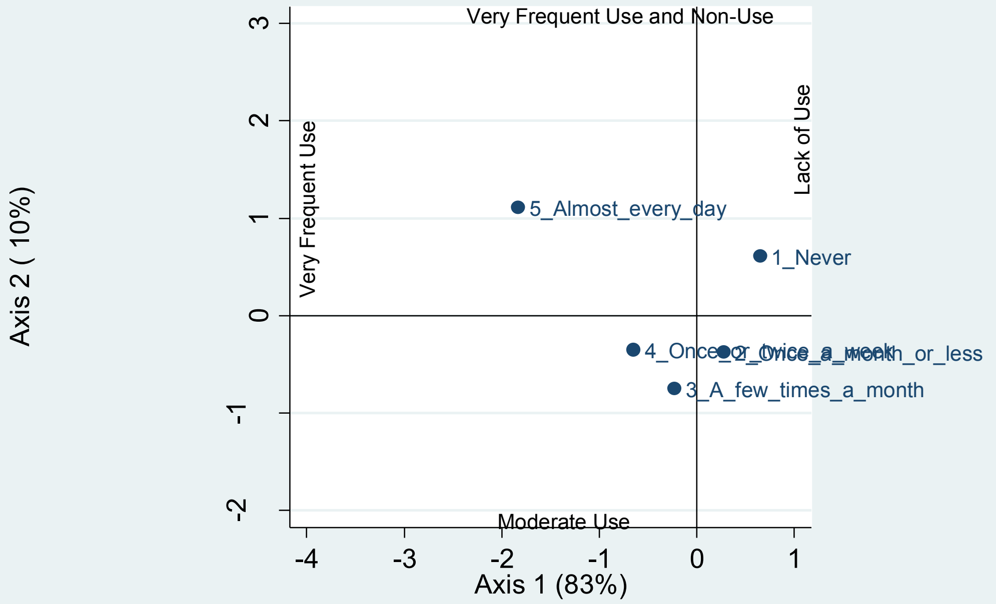


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Denmark-05-04-2012" folder.

Figure 5.8. MCA Coordinate Plot of Using Graphics

For Denmark



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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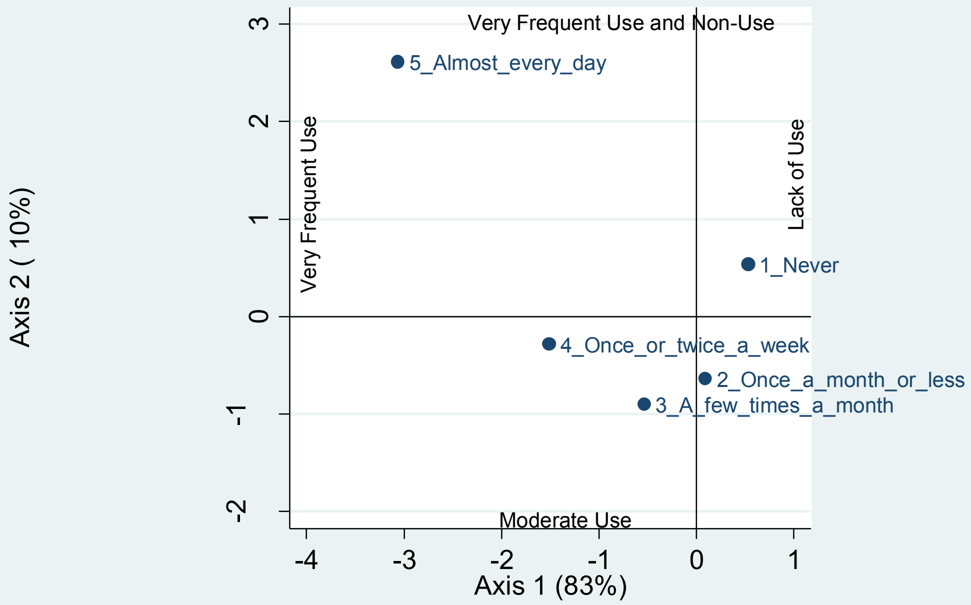
Figure 5.9. MCA Coordinate Plot of Using Educational Software

For Denmark

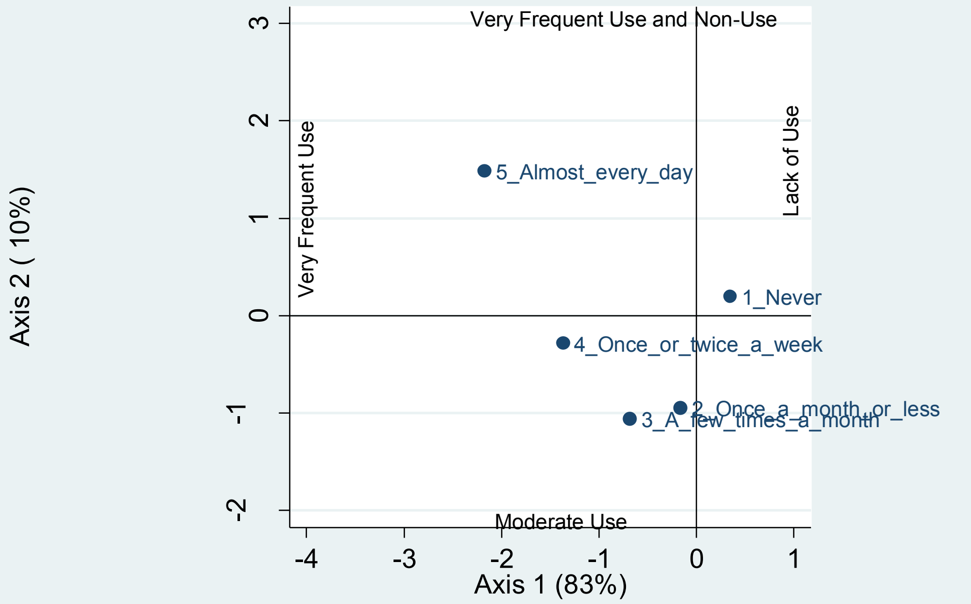


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Denmark-05-04-2012" folder.

Figure 5.10. MCA Coordinate Plot of Programming

For Denmark



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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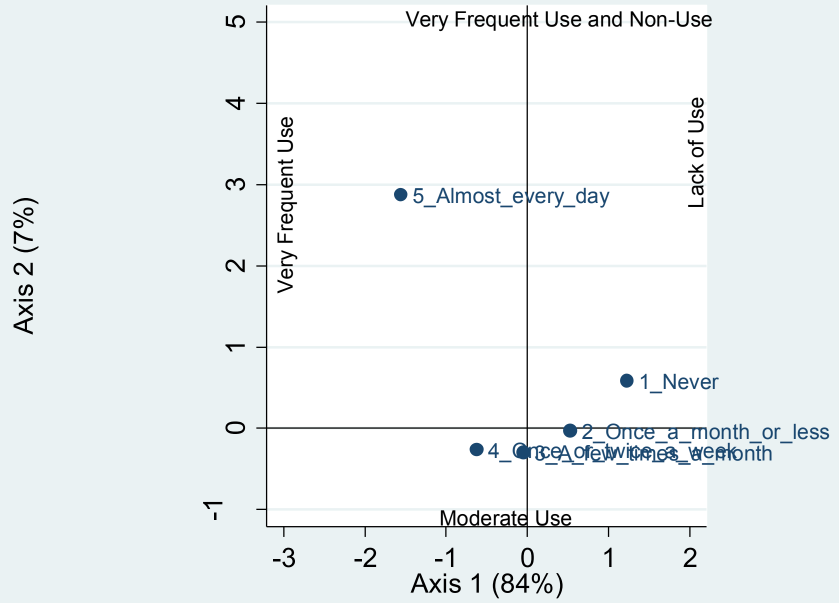
Figure 5.11. MCA Coordinate Plot of Writing Documents

For Korea

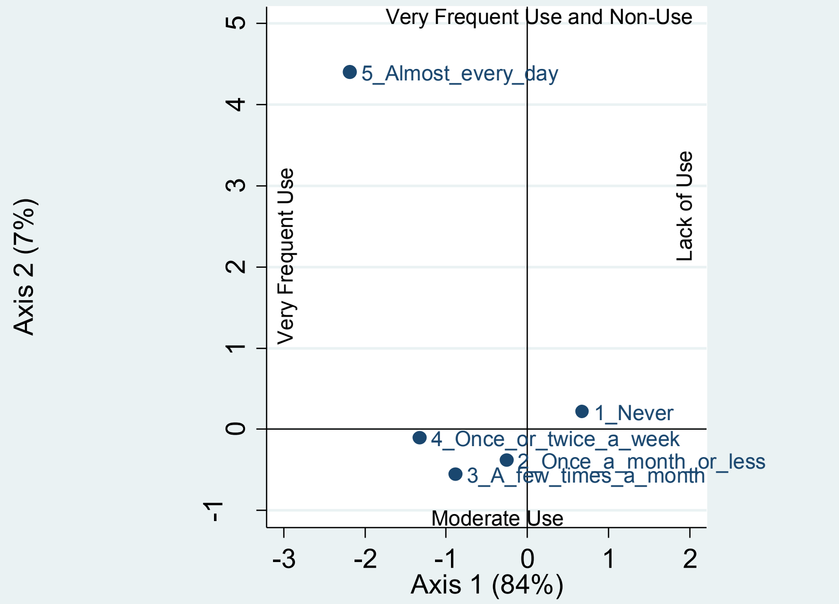


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Korea-05-04-2012” folder.

Figure 5.12. MCA Coordinate Plot of Using Spreadsheets

For Korea



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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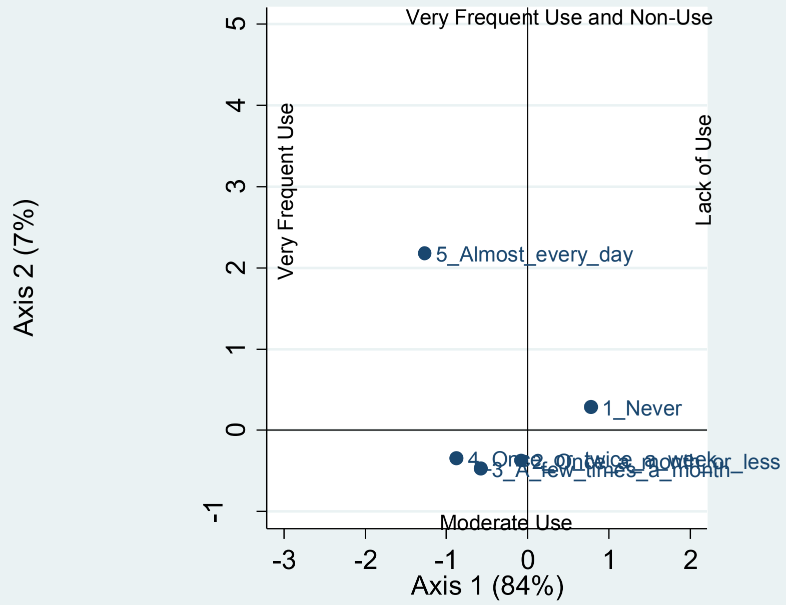
Figure 5.13. MCA Coordinate Plot of Using Graphics

For Korea

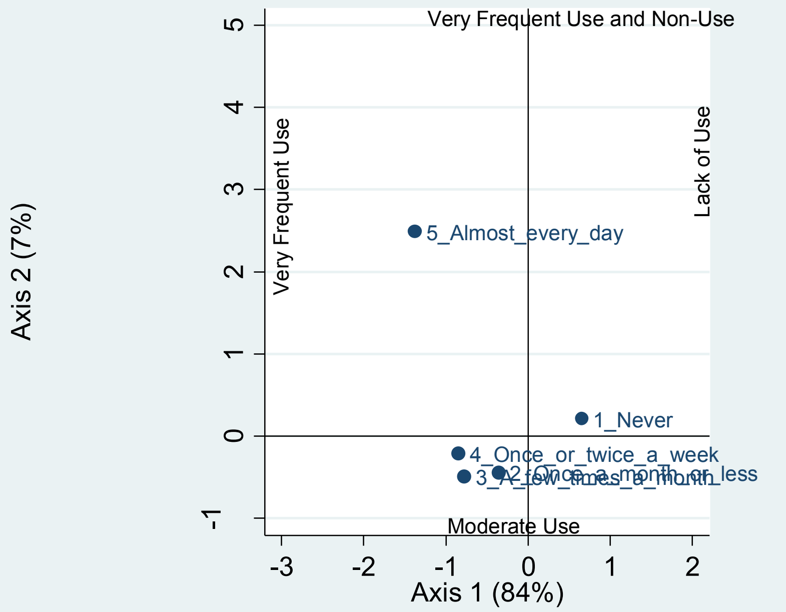


Note: Coordinates in principal normalization. Source: The PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Korea-05-04-2012" folder.

Figure 5.14. MCA Coordinate Plot of Using Educational Software

For Korea



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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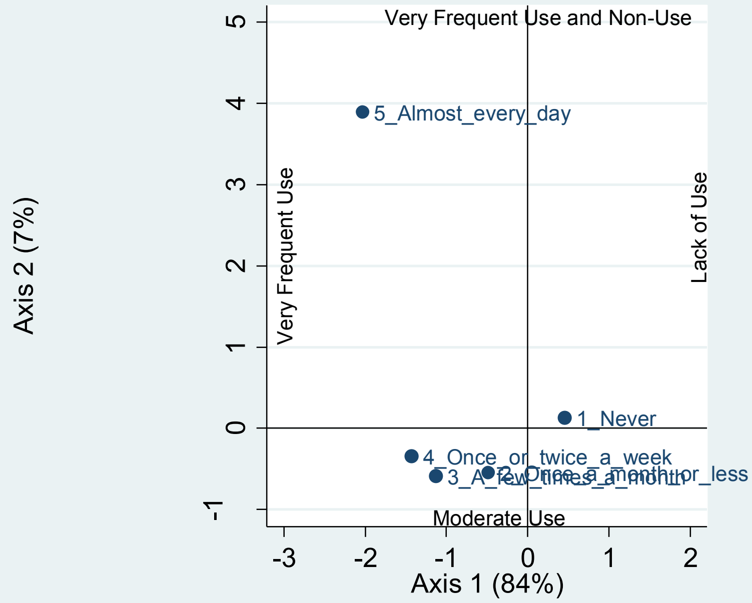
Figure 5.15. MCA Coordinate Plot of Programming

For Korea

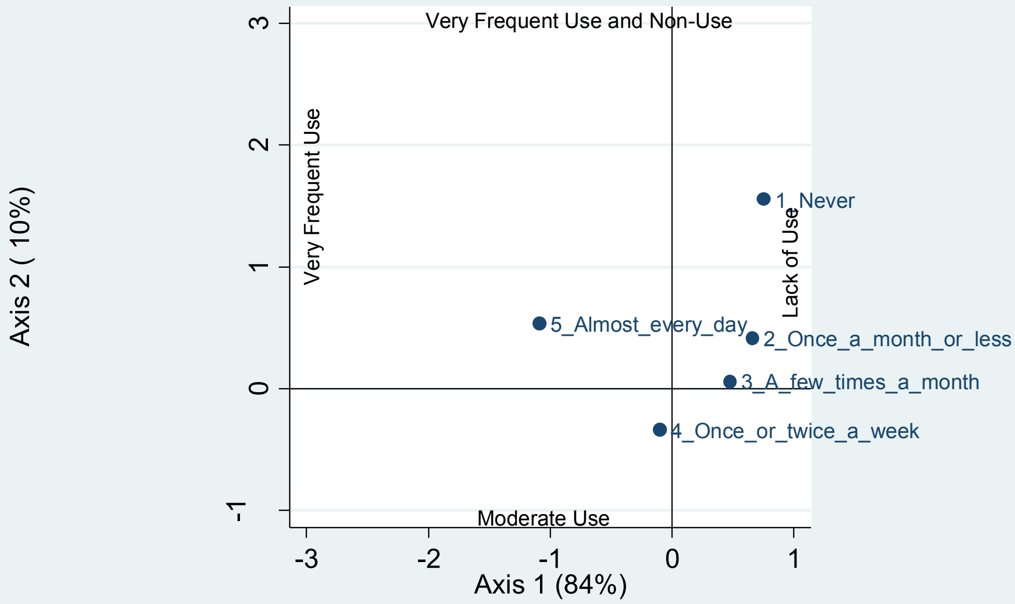


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Korea-05-04-2012” folder.

Figure 5.16. MCA Coordinate Plot of Writing Documents

For the Netherlands



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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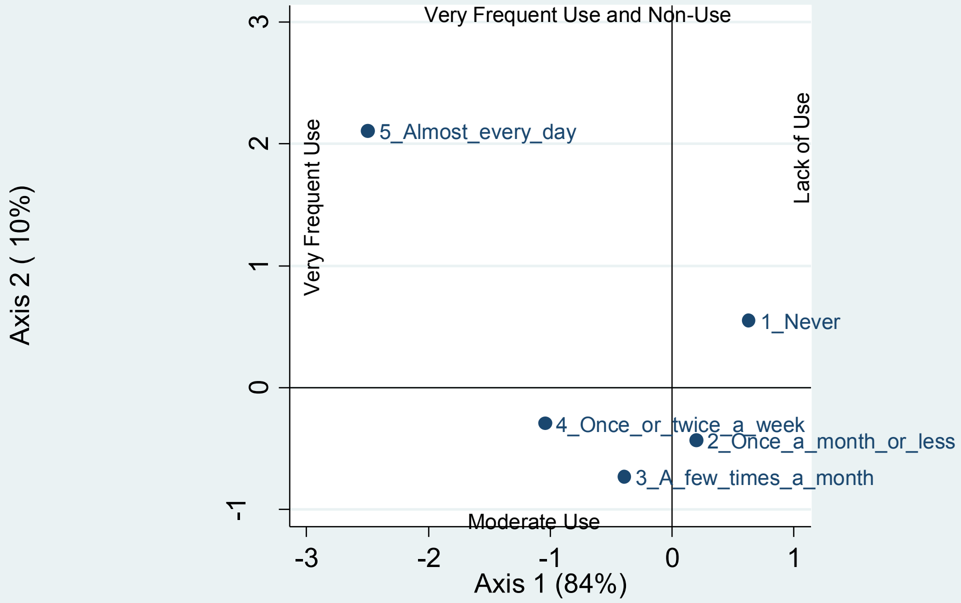
Figure 5.17. MCA Coordinate Plot of Using Spreadsheets

For the Netherlands

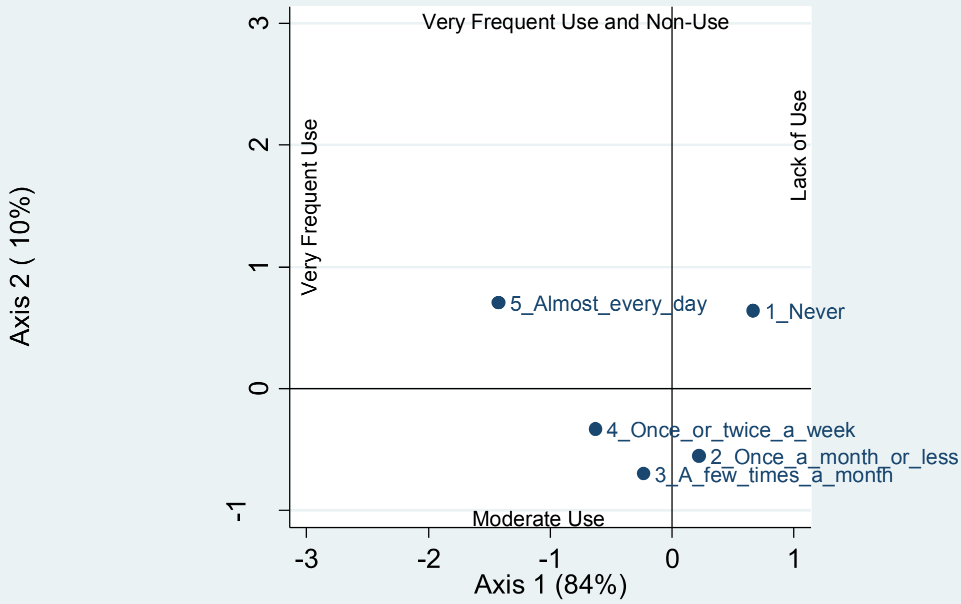


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Netherlands-05-04-2012” folder.

Figure 5.18. MCA Coordinate Plot of Using Graphics

For the Netherlands



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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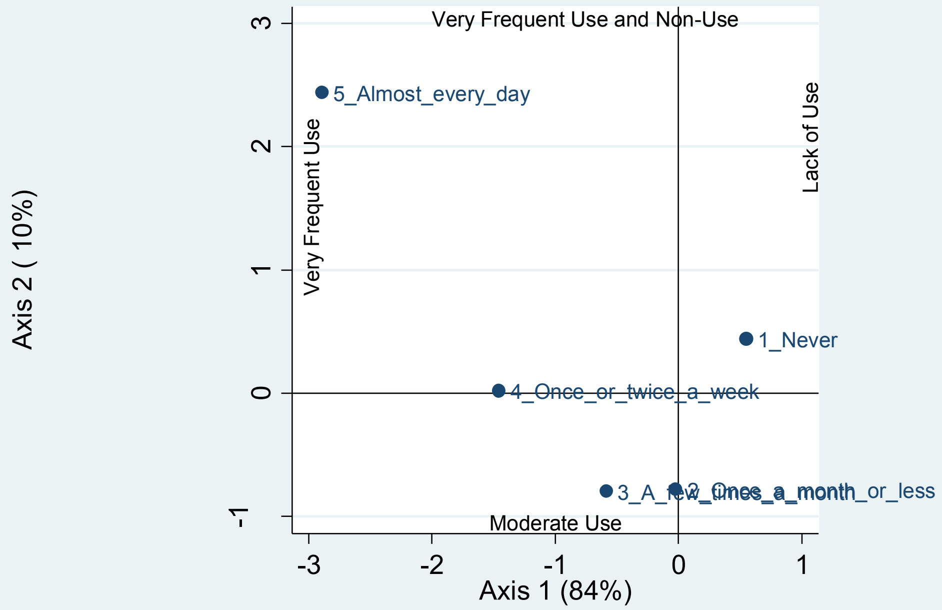
Figure 5.19. MCA Coordinate Plot of Using Educational Software

For the Netherlands

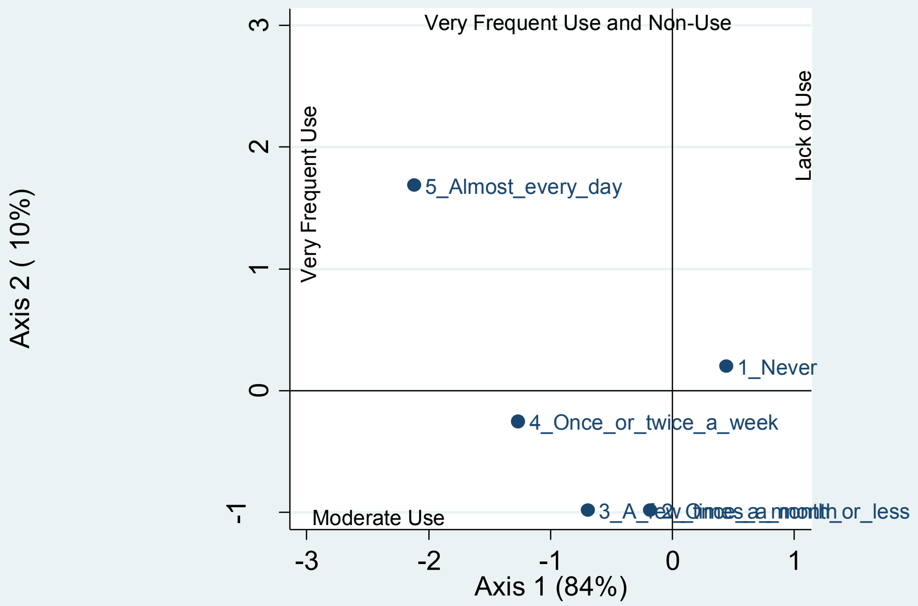


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Netherlands-05-04-2012" folder.

Figure 5.20. MCA Coordinate Plot of Programming

For the Netherlands



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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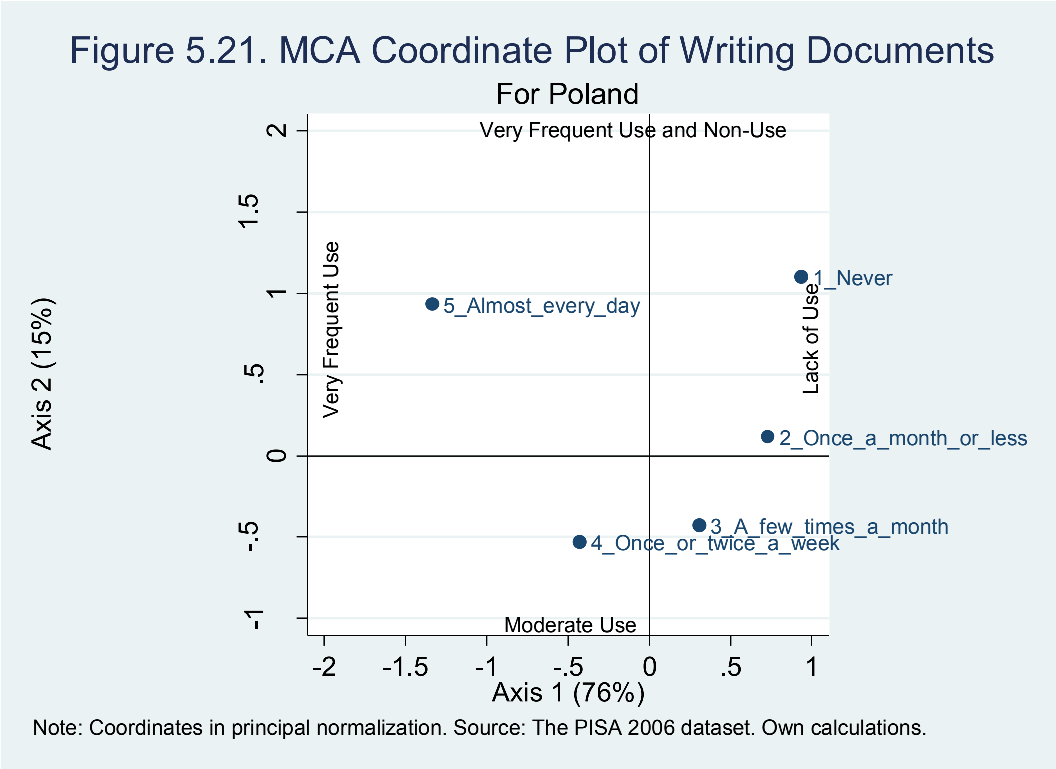

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Poland-05-04-2012" folder.

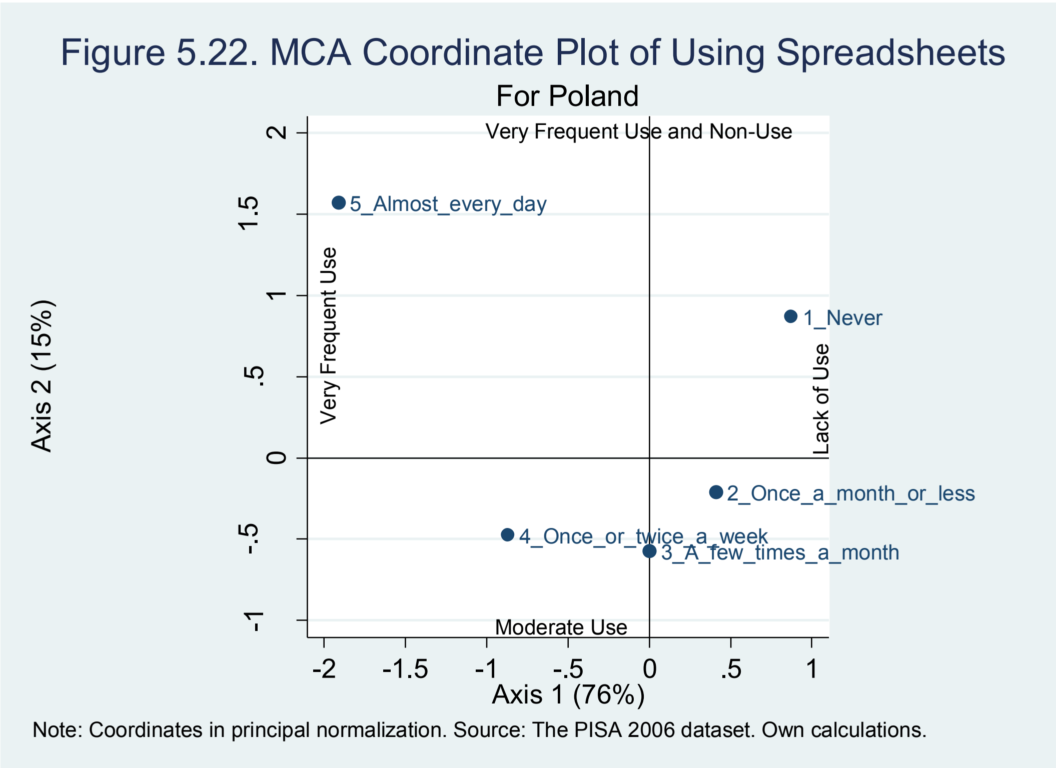

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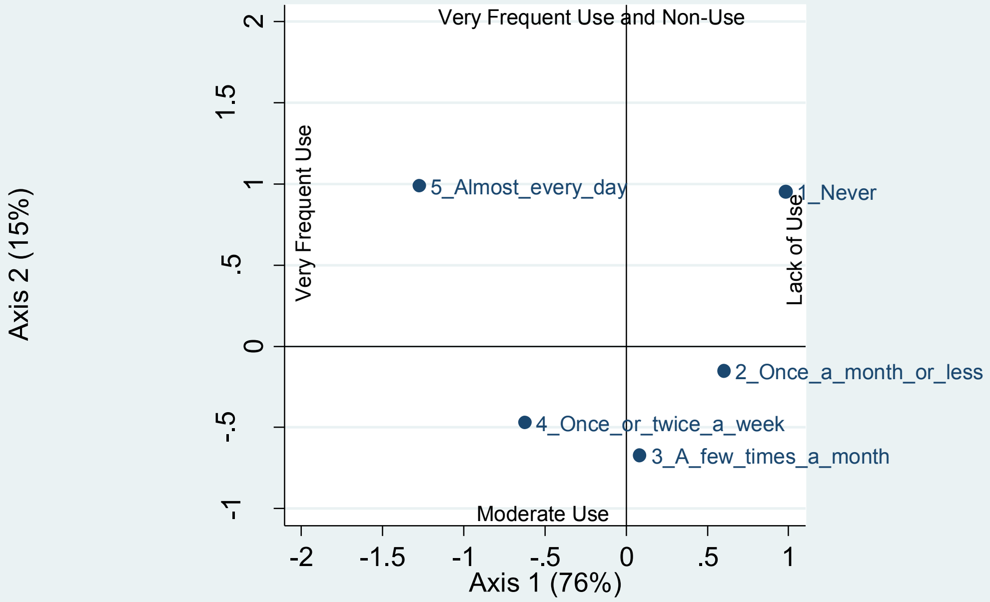
Figure 5.23. MCA Coordinate Plot of Using Graphics

For Poland

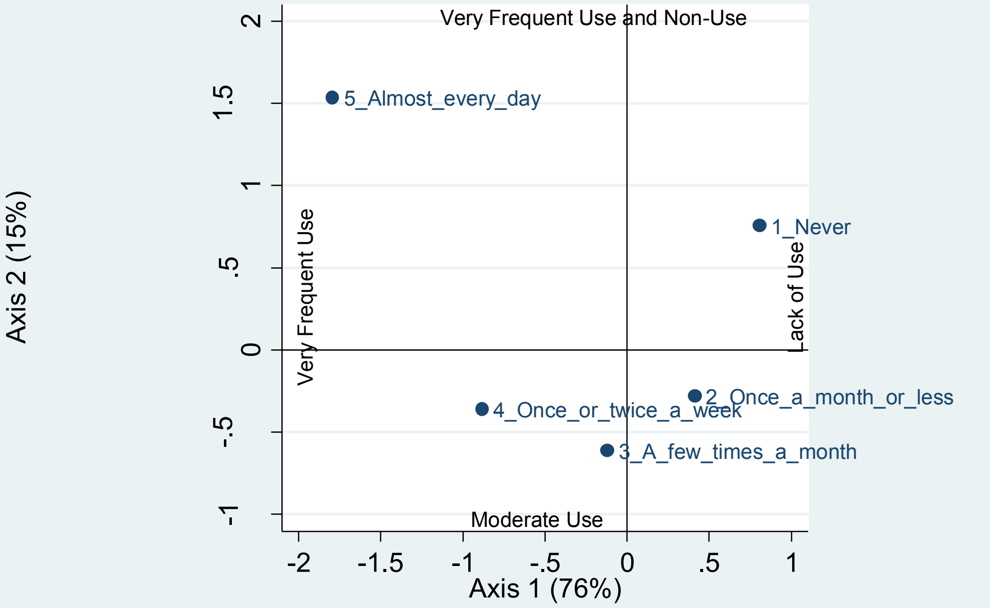


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from “C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Poland-05-04-2012” folder.

Figure 5.24. MCA Coordinate Plot of Using Educational Software

For Poland



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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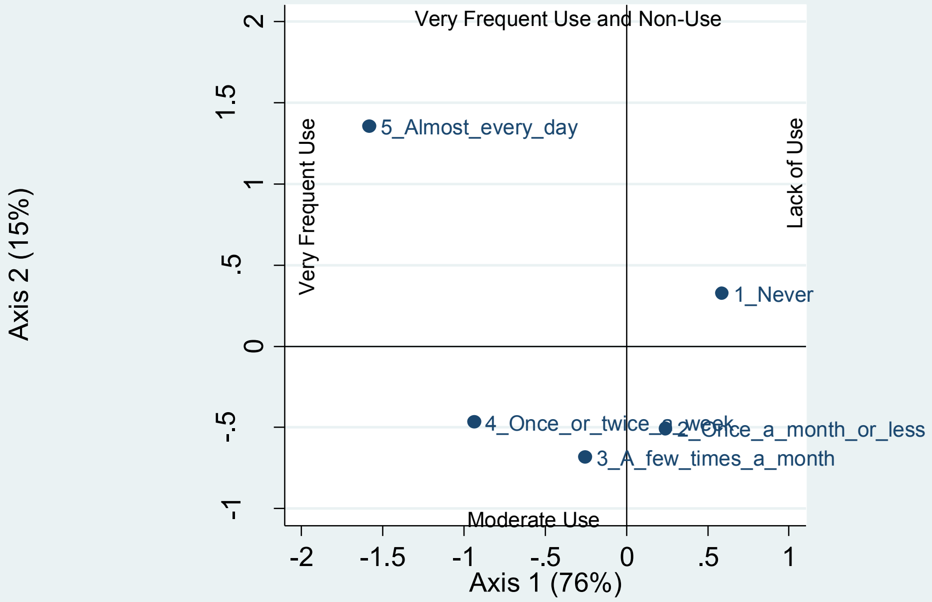
Figure 5.25. MCA Coordinate Plot of Programming

For Poland

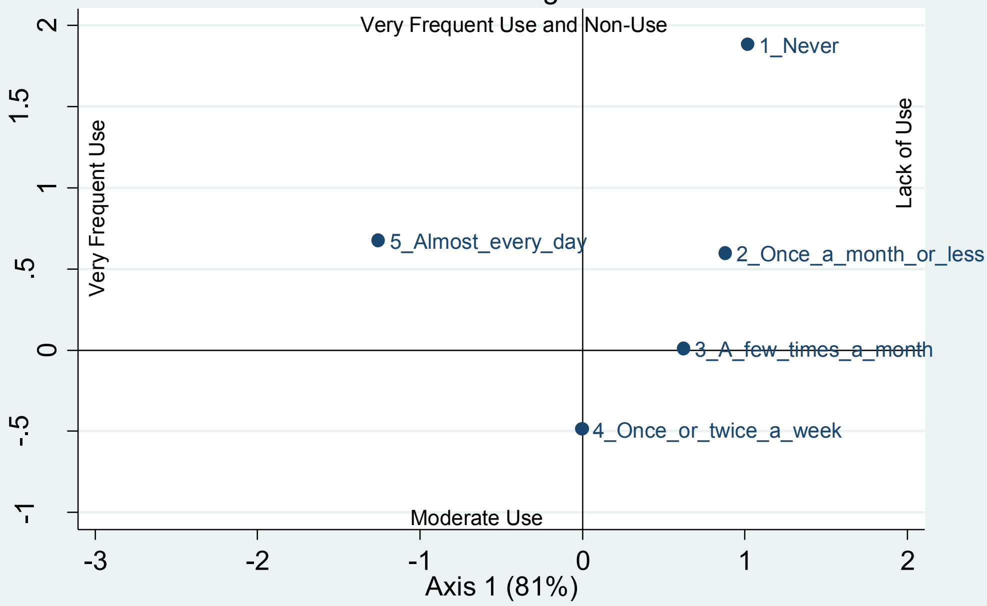


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Poland-05-04-2012" folder.

Figure 5.26. MCA Coordinate Plot of Writing Documents

For Portugal



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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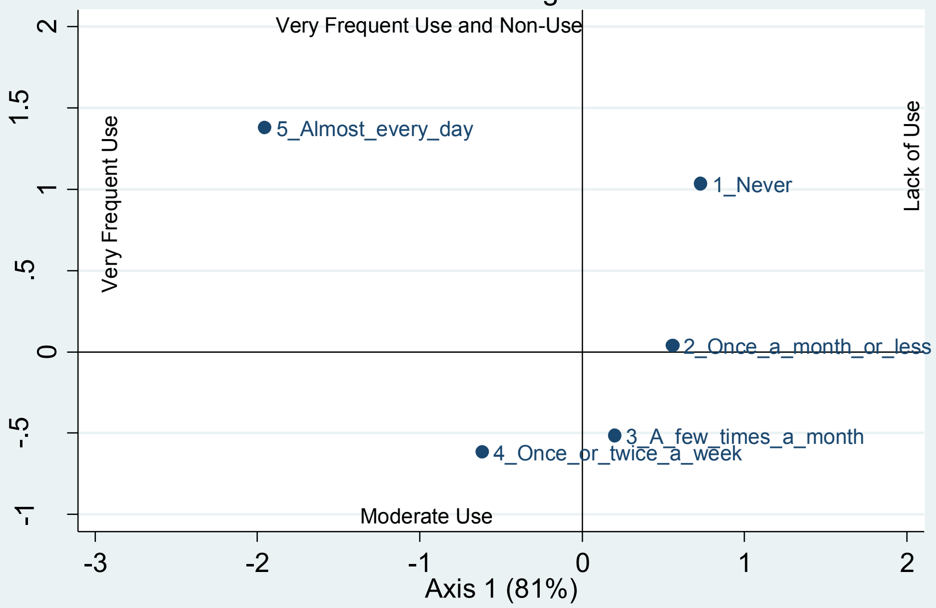
Figure 5.27. MCA Coordinate Plot of Using Spreadsheets

For Portugal

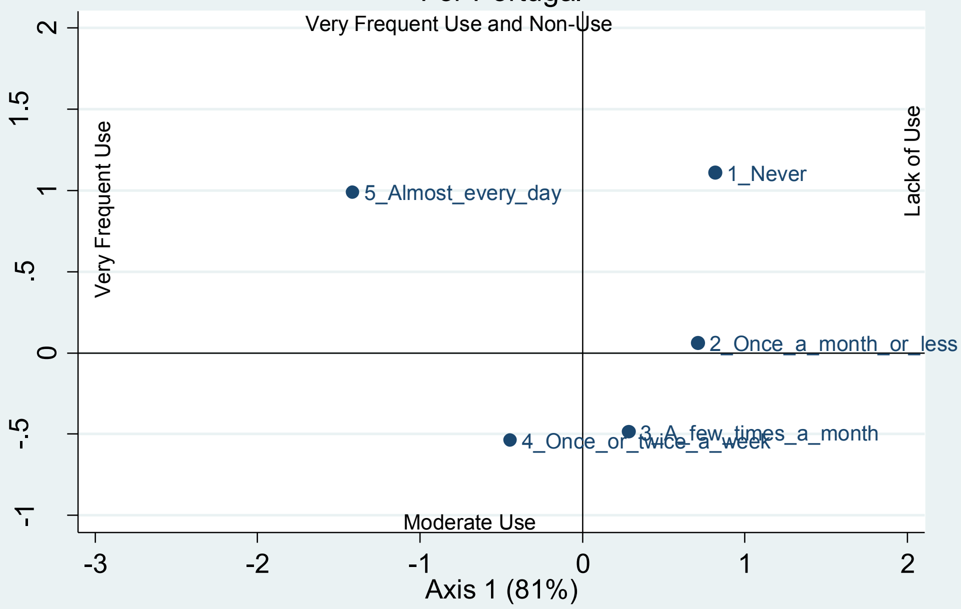


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Portugal-05-04-2012" folder.

Figure 5.28. MCA Coordinate Plot of Using Graphics

For Portugal



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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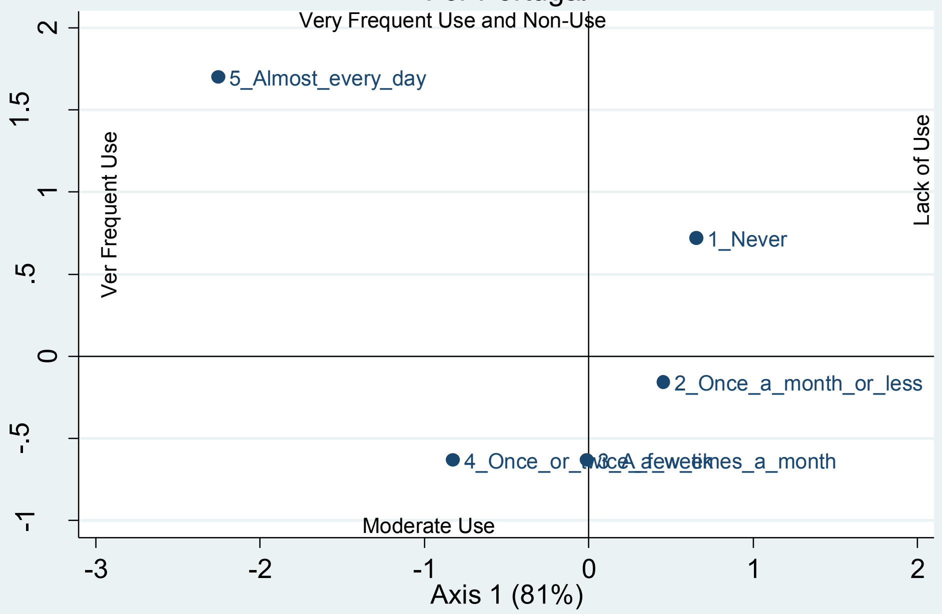
Figure 5.29. MCA Coordinate Plot of Using Educational Software

For Portugal

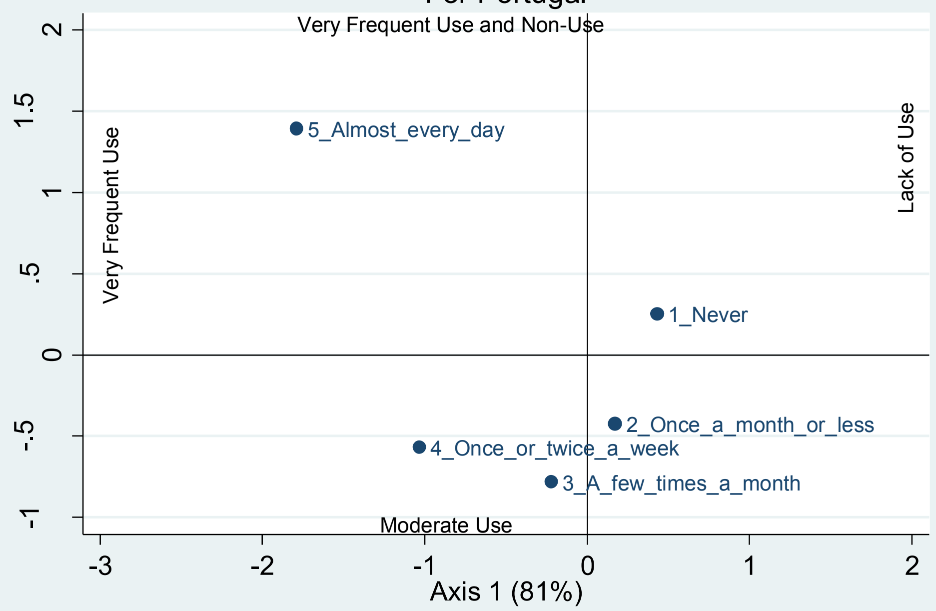


Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\MC(h)Apter\Work\Figures\Portugal-05-04-2012" folder.

Figure 5.30. MCA Coordinate Plot of Programming

For Portugal



Note: Coordinates in principal normalization. Source: The PISA 2006 dataset. Own calculations.

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6. CONCLUSIONS

'Adolescents' internet use thus does not transcend the boundaries of social inequality' (Peter and Valkenburg 2006: 302). This conclusion from the research on Dutch adolescents' use of Internet inspired the endeavour undertaken in the present dissertation. This dissertation was meant to prove the correctness of a similar conjecture in cross-national perspective. As it sometimes happens in the empirical research, the investigation undertaken rejected the conjecture's correctness.

The aim of this dissertation was to investigate whether social inequality, understood here as social class in it's 'big-class,' Erikcson-Goldthorpe's formulation that has become standard in the comparative inequality and social stratification research, gets reproduced with respect to physical, skills, and usage access to computers and the Internet among adolescents living in different societies. In other words, in its present form, this dissertation was thought as the investigation into a specific case of class reproduction, class reproduction of a newly emergent form of cultural capital.

According to Bourdieu (1986: 243), cultural capital can exist in the objectified state, that is in the form of cultural goods (books, instruments, machines, etc.), and in the embodied state, that is in the form of long-lasting dispositions of the mind and body. Following this Bourdiean tradition, possession of the Internet at home - or physical access - is considered in this dissertation as an example of cultural capital in its objectified state, and the respondent's self-declared confidence in doing ICT high-level tasks (skills access) as well as three different forms of using ICTs (usage access) are considered as examples of cultural capital in its embodied state. Given what is known about the role of education - that is, for Bourdieu, the third or institutionalized state of cultural capital - in the reproduction of social inequality (Blossfeld and Shavit 1993, Dronkers 2008), it was expected that the adolescents of service class background would enjoy a substantial advantage over their working class peers with respect to chances of having the Internet access at home, confidence of using computers and the Internet for more sophisticated aims, and actually using ICTs for educational and communicational rather than entertainment purposes. Thus, ICTs physical, skills, and usage access would turn out to be structured along class lines, with the offspring of higher class acquiring digital cultural capital of better quality than the offspring of lower class. As the analyses reported in chapter three and in chapter five show, this assumption of the reproduction of the 'old' class inequalities in the digital age does not find the empirical

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support among the age category under investigation. Even if, in case of physical access, there are societies in which service class adolescents have close to 30 percent higher probability of having the Internet connection at home than working class adolescents, this advantage can be attributed to a 'temporal' factor, i.e., the availability of technology among the general population. In other words, this advantage decreases as the technology saturates society. Therefore, this dissertation allows to draw a conclusion that in the countries under investigation no substantial segment of the adolescent population is at risk of being, as it were, structurally excluded from the full participation in the information society, which is an important and reassuring piece of information, especially in light of the popularization of different e-learning platforms at all levels of education. The only proviso one can add to this optimistic message is that children of people who are out of labor force might be at such a risk, because the analysis of missing values reported in Appendix 1 suggests that children with parents who are out of labor force are overrepresented among the respondents missing on all the measures of digital access used in the present study. However, further analyses also presented in Appendix 1 show that the inclusion of missing values (assuming that all cases missing on the dependent variable have no digital access) does not substantially change the previous outcome with respect to children whose parents are out of labor force. Thus, if among adolescents there is a category of special concern with respect to the possibility of digital exclusion, it is not any well established, ‘traditional’ social class, but the category of the children of people who are excluded from the participation in the labor market.

This clear lack of reproduction of inequality is also an indirect proof of a generational effect in matters of physical, skills, and usage digital inequality in present-day societies. The proof’s indirectness comes from the fact – already mentioned in the Introduction – that the PISA study is by design cross-sectional and as such incapable of proving or disproving the existence of cohort effects.

The present study also looked into another factor that usually contributes to different forms of social inequality: i.e., gender. Volman et al. (2005) argue that there are fewer gender differences in attitude regarding ICTs among younger pupils than among older ones and that therefore, in a context of a technologically advanced society, one can expect the disappearance of such differences in future generations. Because the PISA study does not cover psychological or motivational access to computers and the Internet, one cannot conduct the investigation that would look into this particular issue on the basis of the PISA’s datasets. As the analysis reported in chapter four shows, however, even if Volman et al.’s conjecture might be correct with respect to attitudes towards ICTs, such an attitudinal gender equality

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among adolescents nevertheless seems not to translate into gender equality in terms of the Internet access at home and the frequency of educational and entertainment ICT use (boys' advantage), as well as communicational ICTs usage (girls' advantage).

That boys declare having the Internet access at home more frequently than girls and that girls declare using ICTs/Internet for communicational purposes more frequently than boys can be easily interpreted as the persistence of traditional gender scripts and roles – the persistence independent of the level of general gender equality as measured with the Gender Gap Index across the societies under investigation. The interpretational problems with boys' advantage over girls in the frequency of using educational software have already been discussed in chapter six. Here one can only point to the need of further research that would establish whether the increased frequency of using ICTs/Internet for educational purposes by some group or category[70] indicates its educational advantage or disadvantage over others.

Finally, that boys declare they spend more time playing computer games than girls should not be dismissed with a shrug. (along the lines 'Who cares about stupid games?' and 'Tell us something we have not known already'). Nor should it be interpreted in terms of concern for boys' decreased well-being only, as for example by Jackson et al. (2010: 327) who are legitimately worried that increased computer games playing among adolescent boys might be associated with such negative outcomes as a lower behavioural self-concept, lower self-esteem, lower academic performance and more frequent incidents of problem behaviour at school.

There are two reasons for such a broader approach. First of all, one should not forget that the constitutive character of play in any human culture – and thus play's 'seriousness and importance' – has been acknowledged ever since the publication of the famous essay by Huizinga (1938/1950). It can therefore be argued that the investigation into how one's gender expands or limits one's participation in the contemporary world of play (of which the present-day computer games are, as it were, quintessence) reveals gender's stratifying role in an important sphere of social life (albeit the one oft-times looked upon disparagingly at least in some corners of the academia). Secondly, to acknowledge the significance of computer games, one does not necessarily have to sign up to Johnson's (2005: 139-156) argument that it is contemporary pop culture's growing sophistication (in which the growing technical and narrative sophistication of computer games plays an important role) which is responsible – at least in part – for the increase of IQ levels from generation to generation, a phenomenon also

[70] Not necessarily boys and girls, but also, for example, different ethnic or racial categories or urban/rural dwellers etc.

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known as the Flynn effect (Flynn 2009).[71] It is enough to realize that through interaction with computer games environments gamers learn the basic procedure of the scientific method (the 'probe, hypothesis, reprobe, rethink' circle (Gee 2003: 87-92)) to come to the conclusion that computer games do many things that are excellent pedagogy (Gentile and Gentile 2008) in that they 'are motivating, provide immediate feedback, can adapt themselves to the level of the learner, provide repetition to the point of automacity, encourage distributed learning, can teach for transfer, and use other excellent teaching techniques' (Gentile 2011: 75). In other words, computer games and the Internet are an extremely important part of contemporary adolescents' so-called informal learning environment, and

> are important sources of cognitive socialization, often laying the foundation for knowledge acquisition in school. (...) [Thus they are] producing learners with a new profile of cognitive skills. This profile features widespread and sophisticated development of visual-spatial skills, such as iconic representation and spatial visualisation. *A pressing social problem is* the prevalence of violent video games, leading to desensitization, aggressive behaviour, and *gender inequity in opportunities to develop visual-spatial skills* (italics added – T. D.) (Greenfield 2009: 69).

Seen from this perspective, the apparently trivial finding that boys declare playing computer games more frequently than girls acquires a completely new significance.

Before commenting on practical recommendations one can draw from the study presented in this dissertation, a word on the possibility of analyzing the data using different research design. One might object that the research question about the better class scheme at hand should be treated from the very start within a multilevel design. In my opinion, however, such a more sophisticated approach can be applied only when one has solid descriptive knowledge, which was clearly not available at the start of my thesis. As I see it, the present version of my dissertation is a necessary step that prepares the ground for the multilevel analysis suggested. I am convinced that following this multilevel strategy in the next step is the right approach for addressing the 'which class scheme is better' question that I gave up in the present version of my dissertation. I hope that other researchers or even myself shall use this multilevel research design while revisiting the problem of digital

[71] Although it is worth noticing that Green and Bavelier (2003) found the positive effect of playing computer games on visual intelligence and memory. In their experiment participants were asked to perform a series of quick visual recognition tests, similar to (i.e., more time-sensitive, but less intricate than) the Raven matrices tests.

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inequalities among adolescents as analyzed in the perspective of 'which class scheme is better.' These follow-up studies can build upon the descriptive basis of my dissertation, but at the very same time go beyond the descriptive scope of my thesis.

In terms of policy recommendations the conclusions one can derive from the analysis presented in this dissertation are very short, simple, and optimistic. Given the lack of any substantive digital inequality of any kind among adolescents in the countries under investigation neither the public authorities of any level (local/regional/national/supranational) nor the NGOs need to allot money for initiatives aimed at combating digital exclusion among this age category. It is beyond the scope of this dissertation to investigate whether the current equitable situation among adolescents with respect to access to computers and the Internet is solely the effect of the free operation of market forces (which would vindicate the position espoused by Compaigne 2001) or is it also the result of massive public investments into computerization of public schools that took place across the developed world in the late 1990s and in the early 2000s. Thus, the above non-investment recommendation does not mean that the current levels of public expenditures on digital infrastructure[72] in public school systems should be cut. Decisions to cut funding of any currently running youth-addressed digital inclusion programs should always be made on a case-by-case basis, after evaluation of the particular program's effectiveness and/or efficiency in reaching its goals. In other words, the recommendation given above should be interpreted only as saying that no new programs aimed *especially* at digital inclusion of adolescents are needed. However, programs of social inclusion of children and adolescents from disadvantaged backgrounds and areas that only take the form of digital inclusion programs and in fact address other deficits – e.g., through setting up a youth center equipped with computers connected to the Internet in an inner-city poverty enclave – should be cut only in case they do not deliver their 'real,' non-digital inclusion goals.

To conclude bluntly, the non-issue does not need being addressed, and the taxpayer's money – if there are any still left in the public purse, that is – can be better allocated to policies aimed at preventing and counteracting other kinds of inequality or poverty among children and adolescents living in developed countries (and that – alas – these 'other kinds of inequality and poverty among children and adolescents' living in affluent societies are plenty, one can learn by reading, for example, UNICEF 2010).

[72] Understood broadly, not only as outlays on computer hardware or software, but also, for example, as expenditures on providing teachers and instructors with the appropriate training so that subsequently they can effectively use new technologies in their classroom or day-care room work with children and adolescents.

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Appendix 1

This appendix deals with the issue of missing values on the dependent variables used in the analysis in chapter three. The dependent variables used in these chapters are as follows. For physical access to the Internet at home the dependent variable is operationalized as the dummy variable 'INTERNET', coded zero if the respondent does not report having the Internet connection at home and coded one if the respondent has the Internet connection at home. For skills access the dependent variable 'HIGHCONF' is operationalized as the index measuring respondents' self-reported confidence in doing ICT high-level tasks. Usage access is operationalized in three different ways: as the index of ICT/Internet educational use (EDUCUSE), as the five-point categorical answer scale to the question 'How often do you use computers for communication (e.g., e-mail or 'chat rooms')?' (COMMUNIC), and finally as the index of ICT/Internet entertainment use (ENTERTUSE).

Table A1 presents for each dependent variable described above the total number of observations (TOTAL), the number of missing values (MISSING), and the number of missing values expressed as the percentage of the total number of observations (%). Tabulations are broken down by country; the last row of the Table A1 presents the same three values summed up for all the countries under study. This last row shows that there are 1.93 percent values missing on the dummy variable for physical access to the Internet at home, 7.96 percent values missing on the index measuring respondents' self-reported confidence in doing ICT high-level tasks, 6.63 percent values missing the index of ICT/Internet educational use, 4.87 percent values missing the index of ICT/Internet communicational use, and 5.89 percent values missing the index of ICT/Internet entertainment use.

There are, however, countries in which the percentage of missing values on the dependent variables used in the analyses in chapters three and four are substantially greater than the values for all the countries under investigation considered together. Thus, for the dummy variable for physical access to the Internet at home, the number of missing values stands at 6.16 percent in Colombia, 5.96 percent in Jordan, and 7.90 percent in the Russian Federation. In other countries under investigation, the percentage of missing values on the physical access dependent variable is lower than the values for Jordan.

For the index of confidence in doing ICT high-level tasks, the number of missing values exceeds five percent in seventeen countries, namely in Australia (5.10), Canada (9.48), the Czech Republic (6.74), Denmark (7.66), Greece (6.98), Ireland (5.19), Lithuania (9.04), Macao (9.58), the Netherlands (7.51), New Zealand (5.33), Norway (6.93), the Russian

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Federation (6.91), Serbia (9.19), Slovakia (7.02), Slovenia (7.05), Spain (6.30), and Sweden (5.99). For the same index, the number of missing values exceeds ten percent in eleven countries, namely Bulgaria (12.52), Chile (13.78), Colombia (12.73), Croatia (11.01), Germany (10.59), Iceland (14.24), Japan (16.75), Jordan (10.85), Qatar (24.10), Turkey (12.85), and Uruguay (17.50).

For the index of ICT/Internet educational use, the number of missing values exceeds five percent in fifteen countries, namely in Belgium (6.13), Canada (11.26), the Czech Republic (6.19), Denmark (5.94), Germany (9.16), Greece (5.97), Ireland (8.81), Jordan (9.86), Macao (7.69), the Netherlands (6.51), Norway (5.73), the Russian Federation (6.24), Serbia (5.65), Slovenia (6.81), and Spain (5.57). For the same index the number of missing values exceeds ten percent in eight countries, namely in Bulgaria (12.09), Chile (11.26), Colombia (12.30), Croatia (10.15), Japan (16.57), Qatar (13.71), Turkey (11.51), and Uruguay (15.60).

For the index of ICT/Internet communicational use, the number of missing values exceeds five percent in ten countries, namely in Bulgaria (9.89), Canada (7.79), Chile (9.57), Colombia (8.13), Croatia (8.57), Ireland (6.32), Macao (6.20), Qatar (9.39), Slovenia (5.25), and Turkey (9.79). For the same index the number of missing values exceeds ten percent in two countries, namely Japan (15.71) and Uruguay (12.28).

For the index of ICT/Internet entertainment use, the number of missing values exceeds five percent in fourteen countries, namely in Belgium (5.59), Canada (8.36), Croatia (9.44), the Czech Republic (5.45), Denmark (5.30), Germany (8.53), Ireland (7.70), Jordan (7.71), Macao (7.02), the Netherlands (5.40), the Russian Federation (6.28), Serbia (5.11), Slovenia (6.34), and Spain (5.10). For the same index the number of missing values exceeds ten percent in seven countries, namely in Bulgaria (10.72), Chile (11.01), Colombia (10.27), Japan (16.23), Qatar (11.81), Turkey (11.15), and Uruguay (14.20).

Further analysis shows that, unfortunately, data are not missing at random. Tables A2-A6 present the results of the sensitivity tests run in each country separately on the missing values of the dependent variables used in the main analyses reported in chapter three. The sensitivity tests take the form of logistic regression in which the dependent variable is coded as one if the respondent is missing on one of the indicators of digital access (consecutively: INTERNET for physical access, HIGHCONF for skills access, EDUCUSE, COMMUNIC, and ENTERTUSE for usage access) and coded zero if otherwise. Each of such dummy variables is regressed on the same set of independent variables as those used in the main analysis in chapters three and four: dummy variables indicating father’s and mother’s social

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class background (out of labor force, farmers, agricultural workers, routine nonmanuals, and service class, with working class serving as the reference category), a dummy variable coded as one if the respondent is a girl and coded as zero if the respondent is a boy, and a dummy variable coded one if the respondent is the first- or second-generation immigrant and coded as zero if the respondent is an indigenous in a given country.

Table A2 reports logistic regression coefficients from the model in which the dependent dummy variable indicates as one that the respondent is missing on physical access to the Internet at home. It turns out that having a father out of labor force significantly increases the likelihood of being missing on the physical access variable in 28 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Colombia, Denmark, Finland, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, Serbia, Slovenia, Spain, Sweden, Switzerland, and Uruguay), and that having a mother out of labor market significantly increases the likelihood of being missing on the physical access variable in 23 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, the Czech Republic, Finland, Germany, Iceland, Ireland, Italy, Latvia, Lithuania, New Zealand, Norway, Portugal, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Uruguay). Having a service class father significantly decreases the likelihood of being missing on the physical access variable in ten of the 39 countries under investigation (Belgium, Bulgaria, Croatia, Greece, Jordan, Lithuania, Serbia, Slovenia, Spain, and Uruguay), while having the mother that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the physical access variable in eight of the 39 countries under investigation (Colombia, Croatia, Germany, Hungary, Ireland, New Zealand, Norway, and Serbia), and having a service class mother significantly decreases the likelihood of being missing on the physical access variable in twelve of the 39 countries under investigation (Australia, Belgium, Colombia, Croatia, Germany, Hungary, Ireland, New Zealand, Serbia, Slovenia, Spain, and Uruguay). Being a girl significantly increases the likelihood of being missing on the physical access variable in Serbia only, and it significantly decreases the likelihood of being missing on the physical access variable in four of the 39 countries under investigation (Hungary, Iceland, Qatar, and Switzerland). Finally, being of immigrant origin significantly increases the likelihood of being missing on the physical access variable in two of the 39 countries under investigation (Colombia and Japan), and it significantly decreases the likelihood of being missing on the physical access variable in nine

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of the 39 countries under investigation (Australia, Canada, Germany, Ireland, Jordan, New Zealand, Norway, Qatar, and Sweden).

Table A3 reports logistic regression coefficients from the model in which the dependent dummy variable indicates as one that the respondent is missing on skills access. It turns out that having a father out of labor force significantly increases the likelihood of being missing on the skills access variable in 30 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Colombia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Jordan, Latvia, Lithuania, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand and Uruguay), and that having a mother out of labor force significantly increases the likelihood of being missing on the skills access variable in 26 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Finland, Germany, Iceland, Ireland, Italy, the Netherlands, New Zealand, Norway, Poland, Portugal, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and Uruguay). Having the father that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the skills access variable in six of the 39 countries under investigation (Belgium, Japan, Jordan, Serbia, Turkey, and Uruguay). A service class father significantly decreases the likelihood of being missing on the skills access variable in 21 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Chile, the Czech Republic, Germany, Ireland, Italy, the Netherlands, New Zealand, Norway, Poland, Qatar, the Russian Federation, Slovakia, Slovenia, Spain, Switzerland, Thailand, Turkey, and Uruguay), while having the mother that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the skills access variable in nine of the 39 countries under investigation (Australia, Belgium, Chile, Germany, Hungary, Ireland, Serbia, Slovakia, and Slovenia), and having a service class mother significantly decreases the likelihood of being missing on the skills access variable in fifteen of the 39 countries under investigation (Belgium, Bulgaria, Chile, Croatia, Finland, Germany, Ireland, Latvia, Lithuania, the Netherlands, the Russian Federation, Serbia, Slovakia, Slovenia, and Uruguay). Being a girl significantly increases the likelihood of being missing on the skills access variable in four of the 39 countries under investigation (Japan, Macao, Serbia and Turkey), and it significantly decreases the likelihood of being missing on the skills access variable in fourteen of the 39 countries under investigation (Australia, Belgium, Canada, Iceland, Ireland, Italy, Jordan, Latvia, Lithuania, New Zealand, Portugal, Qatar, Slovenia, and Spain). Finally, being of immigrant origin significantly increases the likelihood

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of being missing on the skills access variable in seven of the 39 countries under investigation (Austria, Belgium, Denmark, Italy, the Netherlands, Portugal, and Spain), and it significantly decreases the likelihood of being missing on the skills access variable in three of the 39 countries under investigation (Australia, Canada, and Jordan).

Table A4 reports logistic regression coefficients from the model in which the dependent dummy variable indicates as one that the respondent is missing on educational ICT usage. It turns out that having a father out of labor force significantly increases the likelihood of being missing on the educational usage access variable in 31 of the 39 countries under investigation (Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Finland, Germany, Greece, Iceland, Ireland, Italy, Japan, Jordan, Korea, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Uruguay), and that having a mother out of labor market significantly increases the likelihood of being missing on the educational usage access variable in 26 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Colombia, the Czech Republic, Denmark, Germany, Iceland, Ireland, Italy, Latvia, Macao, the Netherlands, New Zealand, Norway, Poland, the Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and Uruguay). Having the father that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the educational usage access variable in four of the 39 countries under investigation (Belgium, Denmark, Ireland, and Serbia). A service class father significantly decreases the likelihood of being missing on the educational usage access variable in nineteen of the 39 countries under investigation (Australia, Belgium, Bulgaria, Denmark, Germany, Ireland, Italy, Jordan, Latvia, Lithuania, the Netherlands, Norway, the Russian Federation, Serbia, Slovenia, Switzerland, Thailand, Turkey, and Uruguay), while having the mother that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the educational usage access variable in twelve of the 39 countries under investigation (Australia, Belgium, Bulgaria, Chile, Colombia, Germany, Greece, Hungary, Portugal, Serbia, Slovenia, and Sweden), and having a service class mother significantly decreases the likelihood of being missing on the educational usage access variable in seventeen of the 39 countries under investigation (Australia, Belgium, Bulgaria, Chile, Colombia, Croatia, the Czech Republic, Germany, Greece, Ireland, Latvia, the Russian Federation, Serbia, Slovenia, Spain, Turkey, and Uruguay). Being a girl significantly increases the likelihood of being missing on the educational usage access variable in two of the 39 countries under investigation (Japan and Turkey), and it significantly decreases the likelihood of being

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missing on the educational usage access variable in nineteen of the 39 countries under investigation (Australia, Austria, Belgium, Canada, Chile, Germany, Hungary, Iceland, Italy, Japan, Jordan, Latvia, Lithuania, New Zealand, Qatar, Slovakia, Slovenia, Spain, and Turkey). Finally, being of immigrant origin significantly increases the likelihood of being missing on the educational usage access variable in five of the 39 countries under investigation (Austria, Belgium, Denmark, Italy, and Spain), and it significantly decreases the likelihood of being missing on the educational usage access variable in four of the 39 countries under investigation (Australia, Canada, Jordan, and Qatar).

Table A5 reports logistic regression coefficients from the model in which the dependent dummy variable indicates as one that the respondent is missing on communicational ICT usage. It turns out that having a father out of labor force significantly increases the likelihood of being missing on the communicational usage access variable in 30 of the 39 countries under investigation (Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Germany, Greece, Iceland, Ireland, Italy, Japan, Jordan, Korea, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Uruguay), and that having a mother out of labor force significantly increases the likelihood of being missing on the communicational usage access variable in 25 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Finland, Germany, Hungary, Iceland, Ireland, Italy, Latvia, the Netherlands, New Zealand, Norway, Poland, Qatar, the Russian Federation, Slovakia, Slovenia, Spain, and Sweden). Having the father that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the communicational usage access variable in four of the 39 countries under investigation (Australia, Belgium, Serbia, and Spain). A service class father significantly decreases the likelihood of being missing on the communicational usage access variable in thirteen of the 39 countries under investigation (Australia, Belgium, Germany, Italy, Jordan, Latvia, Lithuania, the Netherlands, New Zealand, the Russian Federation, Slovenia, Spain, and Uruguay), while having the mother that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the communicational usage access variable in eight of the 39 countries under investigation (Belgium, Chile, Germany, Greece, Italy, the Netherlands, Serbia, and Slovenia), and having a service class mother significantly decreases the likelihood of being missing on the communicational usage access variable in fifteen of the 39 countries under investigation (Austria, Belgium, Bulgaria, Chile, Colombia, Croatia, Germany, Greece, Ireland, the Russian Federation, Serbia, Slovakia, Slovenia, Turkey, and Uruguay). Being a

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girl significantly increases the likelihood of being missing on the communicational usage access variable in three of the 39 countries under investigation (Japan, Serbia, and Turkey), and it significantly decreases the likelihood of being missing on the communicational usage access variable in fifteen of the 39 countries under investigation (Australia, Austria, Belgium, Canada, Chile, Colombia, Croatia, Hungary, Iceland, Jordan, Korea, New Zealand, Qatar, Slovenia, and Spain). Finally, being of immigrant origin significantly increases the likelihood of being missing on the communicational usage access variable in six of the 39 countries under investigation (Austria, Belgium, the Czech Republic, Denmark, Italy, and Spain), and it significantly decreases the likelihood of being missing on the communicational usage access variable in four of the 39 countries under investigation (Australia, Canada, Qatar, and Sweden).

Table A6 reports logistic regression coefficients from the model in which the dependent dummy variable indicates as one that the respondent is missing on entertainment ICT usage. It turns out that having a father out of labor force significantly increases the likelihood of being missing on the entertainment usage access variable in 29 of the 39 countries under investigation (Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Croatia, Germany, Iceland, Ireland, Italy, Japan, Jordan, Korea, Macao, the Netherlands, New Zealand, Norway, Poland, Portugal, Qatar, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Uruguay), and that having a mother out of labor force significantly increases the likelihood of being missing on the entertainment usage access variable in 26 of the 39 countries under investigation (Australia, Belgium, Bulgaria, Canada, Chile, Croatia, the Czech republic, Denmark, Finland, Germany, Hungary, Iceland, Ireland, Italy, Latvia, the Netherlands, New Zealand, Norway, Poland, Qatar, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Turkey). Having the father that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the entertainment usage access variable in two of the 39 countries under investigation (Ireland and Serbia). A service class father significantly decreases the likelihood of being missing on the entertainment usage access variable in fifteen of the 39 countries under investigation (Australia, Belgium, Chile, Germany, Hungary, Ireland, Jordan, Latvia, Norway, the Russian Federation, Serbia, Slovakia, Slovenia, Switzerland, and Uruguay), while having the mother that belongs to the class of routine nonmanuals significantly decreases the likelihood of being missing on the entertainment usage access variable in ten of the 39 countries under investigation (Australia, Austria, Belgium, Bulgaria, Germany, Ireland, Italy, Serbia, Slovenia, and Spain), and having a service class mother significantly decreases the likelihood

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of being missing on the entertainment usage access variable in twelve of the 39 countries under investigation (Belgium, Bulgaria, Colombia, Germany, Ireland, Italy, Latvia, Lithuania, the Russian Federation, Serbia, Slovenia, and Uruguay). Being a girl significantly increases the likelihood of being missing on the entertainment usage access variable in three of the 39 countries under investigation (Japan, Serbia, and Turkey), and it significantly decreases the likelihood of being missing on the entertainment usage access variable in eleven of the 39 countries under investigation (Australia, Belgium, Canada, Hungary, Iceland, Italy, Jordan, New Zealand, Qatar, Slovenia, and Spain). Finally, being of immigrant origin significantly increases the likelihood of being missing on the entertainment usage access variable in eight of the 39 countries under investigation (Austria, Belgium, the Czech Republic, Denmark, Ireland, Italy, Spain, and Switzerland), and it significantly decreases the likelihood of being missing on the entertainment usage access variable in four of the 39 countries under investigation (Australia, Canada, Germany, and Qatar).

To sum up, the sensitivity analysis shows that in the majority of countries under investigation, the respondents whose either father or mother is out of labor force are overrepresented among the respondents who are missing on all five measures of digital access used as the dependent variable in the analyses reported in chapter three. On the other hand, in the majority of countries under investigation, the respondents whose either father or mother belongs to one of the following social classes: routine non-manuals or service class – such respondents are underrepresented among the respondents who are missing on all five measures of digital access used as the dependent variable in the analyses reported in chapter three.

To estimate the size of the bias caused by missing values, all models from chapter three are rerun in such a way that all missing values on the dependent variables are assigned to the following categories: the respondent does not have the Internet access at home; the respondent has 'No confidence' in one's own digital skills; the respondent never uses computer and the Internet for education, communication, or entertainment purposes. This additional analysis is conducted only for countries where there are more than five percent of missing values on the dependent variable. As Table A1 shows, there are only three such countries with respect to physical access, namely: Colombia (6.16%), Jordan (5.96%), and Qatar (7.90%). With respect to skills access there are 29 such countries, namely: Australia (5.10%), Belgium (7.76%), Bulgaria (12.52%), Canada (9.48%), Chile (13.78%), Colombia (12.73%), Croatia (11.01%), the Czech Republic (6.74%), Denmark (7.66%), Germany (10.59%), Greece (6.98%), Ireland (14.24%), Italy (5.19%), Japan (16.75%), Jordan

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(10.85%), Lithuania (9.04%), Macao (9.58%), the Netherlands (7.51%), New Zealand (5.33%), Norway (6.93%), Qatar (24.10%), the Russian Federation (6.91%), Serbia (9.19%), Slovakia (7.02%), Slovenia (7.05%), Spain (6.30%), Sweden (5.99%), Turkey (12.85%), and Uruguay (17.50%). With respect to educational usage access, there are 23 such countries, namely: Belgium (6.13%), Bulgaria (12.09%), Canada (9.24%), Chile (11.26%), Colombia (12.30%), Croatia (10.15%), the Czech Republic (6.19%), Denmark (5.94%), Germany (9.16%), Greece (5.97%), Ireland (8.81%), Japan (16.57%), Jordan (9.86%), Macao (7.69%), the Netherlands (6.51%), New Zealand (5.73%), Qatar (13.71%), the Russian Federation (6.24%), Serbia (5.65%), Slovenia (6.81%), Spain (5.57%), Turkey (11.51%), and Uruguay (15.60%). With respect to communication usage access, there are twelve such countries, namely: Bulgaria (9.83%), Canada (7.79%), Chile (9.57%), Colombia (8.13%), Croatia (8.57%), Ireland (6.32%), Japan (15.71%), Macao (6.20%), Qatar (9.39%), Slovenia (5.25%), Turkey (9.79%), and Uruguay (12.28%). And with respect to entertainment usage access, there are 21 such countries, namely: Belgium (5.59%), Bulgaria (10.72%), Canada (8.36%), Chile (11.01%), Colombia (10.27%), Croatia (9.44%), the Czech Republic (5.45%), Denmark (5.30%), Germany (8.53%), Ireland (7.70%), Japan (16.23%), Jordan (7.71%), Macao (7.02%), the Netherlands (5.40%), Qatar (11.81%), the Russian Federation (6.28%), Serbia (5.11%), Slovenia (6.34%), Spain (5.10%), Turkey (11.15%), and Uruguay (14.20%).

To estimate the size of the bias caused by values missing on the dependent variables, I compare logistic (for physical access) and ordinal (for other forms of digital access) regression coefficients from the models from chapter three with regression coefficients from the models in which there are no missing values. Both sets of coefficients indicate that either a father or a mother of the respondent belongs to service class. The reanalysis shows that the size of the bias caused by values missing on the dependent variables used in chapter three is substantively insignificant. Thus, for physical access, the highest difference between the model with and the model without missing values on the dependent variable is recorded in Qatar. The difference is equal to 0.08 log-odds for fathers' (Table A7) and 0.04 log-odds for mothers' class membership (Table A8). For skills access, the highest difference between the model with and the model without missing values on the dependent variable is recorded in Macao – 0.14 ordered log-odds for fathers' class membership (Table A9), and in Qatar with 0.24 ordered log-odds and in Slovenia with 0.13 ordered log-odds for mothers' class membership (Table A10). For educational usage access, the highest difference between the model with and the model without missing values on the dependent variable is recorded in Bulgaria – 0.16 ordered log-odds and in Slovenia – 0.13 ordered log-odds for mothers' class

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membership (Table A12). The differences for communicational (Tables A13 and A14) and entertainment (Tables A15 and A16) usage access are lower than the values of the differences mentioned above in all countries analyzed for the second time. To summarize, the reanalysis suggests that the bias caused by the presence of values missing on the dependent variables in the models from chapter three does not affect the results reported in that chapter.

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Tables for Appendix 1

Table A1. Missing Cases For Measures of Digital Access Used In the Analyses in Chapter Three, By Country

	INTERNET AT HOME			HIGHCONF (SKILLS)			EDUCUSE (educational use)			COMMUNIC (communicational use)			ENTERTUSE (entertainment use)		
	TOTAL	Missing	%	TOTAL	Missing	%	TOTAL	Missing	%	TOTAL	Missing	%	TOTAL	Missing	%
Australia	14,170	265	1.87	14,170	723	5.10	14,170	671	4.74	14,170	543	3.83	14,170	605	4.27
Austria	4,927	48	0.97	4,927	188	3.82	4,927	125	2.54	4,927	99	2.01	4,927	125	2.54
Belgium	8,857	79	0.89	8,857	687	7.76	8,857	543	6.13	8,857	431	4.87	8,857	495	5.59
Bulgaria	4,498	154	3.42	4,498	563	12.52	4,498	544	12.09	4,498	442	9.83	4,498	482	10.72
Canada	22,646	543	2.40	22,646	2,146	9.48	22,646	2,093	9.24	22,646	1,765	7.79	22,646	1,894	8.36
Chile	5,233	117	2.24	5,233	721	13.78	5,233	589	11.26	5,233	501	9.57	5,233	576	11.01
Colombia	4,478	276	6.16	4,478	570	12.73	4,478	551	12.30	4,478	364	8.13	4,478	460	10.27
Croatia	5,213	148	2.84	5,213	574	11.01	5,213	529	10.15	5,213	447	8.57	5,213	492	9.44
The Czech Republic	5,932	59	0.99	5,932	400	6.74	5,932	367	6.19	5,932	237	4.00	5,932	323	5.45
Denmark	4,532	37	0.82	4,532	347	7.66	4,532	269	5.94	4,532	172	3.80	4,532	240	5.30
Finland	4,714	14	0.30	4,714	169	3.59	4,714	94	1.99	4,714	70	1.48	4,714	98	2.08
Germany	4,891	235	4.80	4,891	518	10.59	4,891	448	9.16	4,891	376	7.69	4,891	417	8.53
Greece	4,873	129	2.65	4,873	340	6.98	4,873	291	5.97	4,873	180	3.69	4,873	225	4.62
Hungary	4,490	82	1.83	4,490	218	4.86	4,490	173	3.85	4,490	92	2.05	4,490	133	2.96
Iceland	3,789	40	1.06	3,789	175	4.62	3,789	149	3.93	3,789	103	2.72	3,789	120	3.17
Ireland	4,585	107	2.33	4,585	653	14.24	4,585	404	8.81	4,585	290	6.32	4,585	353	7.70
Italy	21,773	179	0.82	21,773	1,129	5.19	21,773	946	4.34	21,773	642	2.95	21,773	772	3.55
Japan	5,952	27	0.45	5,952	997	16.75	5,952	986	16.57	5,952	935	15.71	5,952	966	16.23
Jordan	6,509	388	5.96	6,509	706	10.85	6,509	642	9.86	6,509	260	3.99	6,509	502	7.71
Korea	5,176	9	0.17	5,176	58	1.12	5,176	68	1.31	5,176	32	0.62	5,176	51	0.99
Latvia	4,719	63	1.34	4,719	206	4.37	4,719	185	3.92	4,719	97	2.06	4,719	136	2.88
Lithuania	4,744	122	2.57	4,744	429	9.04	4,744	199	4.19	4,744	146	3.08	4,744	170	3.58
Macao	4,760	19	0.40	4,760	456	9.58	4,760	366	7.69	4,760	295	6.20	4,760	334	7.02
The Netherlands	4,871	13	0.27	4,871	366	7.51	4,871	317	6.51	4,871	167	3.43	4,871	263	5.40
New Zealand	4,823	94	1.95	4,823	257	5.33	4,823	231	4.79	4,823	168	3.48	4,823	190	3.94
Norway	4,692	100	2.13	4,692	325	6.93	4,692	269	5.73	4,692	190	4.05	4,692	231	4.92
Poland	5,547	136	2.45	5,547	175	3.15	5,547	170	3.06	5,547	91	1.64	5,547	137	2.47
Portugal	5,109	27	0.53	5,109	174	3.41	5,109	167	3.27	5,109	125	2.45	5,109	149	2.92
Qatar	6,265	495	7.90	6,265	1,510	24.10	6,265	859	13.71	6,265	588	9.39	6,265	740	11.81
The Russian Federation	5,799	192	3.31	5,799	401	6.91	5,799	362	6.24	5,799	267	4.60	5,799	364	6.28
Serbia	4,798	150	3.13	4,798	441	9.19	4,798	271	5.65	4,798	197	4.11	4,798	245	5.11
Slovakia	4,731	50	1.06	4,731	332	7.02	4,731	176	3.72	4,731	114	2.41	4,731	155	3.28
Slovenia	6,595	78	1.18	6,595	465	7.05	6,595	449	6.81	6,595	346	5.25	6,595	418	6.34
Spain	19,604	205	1.05	19,604	1,236	6.30	19,604	1,092	5.57	19,604	692	3.53	19,604	1,000	5.10
Sweden	4,443	45	1.01	4,443	266	5.99	4,443	202	4.55	4,443	137	3.08	4,443	166	3.74
Switzerland	12,192	72	0.59	12,192	590	4.84	12,192	424	3.48	12,192	216	1.77	12,192	341	2.80
Thailand	6,192	41	0.66	6,192	249	4.02	6,192	142	2.29	6,192	97	1.57	6,192	121	1.95
Turkey	4,942	89	1.80	4,942	635	12.85	4,942	569	11.51	4,942	484	9.79	4,942	551	11.15
Uruguay	4,839	224	4.63	4,839	847	17.50	4,839	755	15.60	4,839	594	12.28	4,839	687	14.20
All countries	266,903	5,151	1.93	266,903	21,242	7.96	266,903	17,687	6.63	266,903	12,992	4.87	266,903	15,727	5.89

Source: The PISA 2006 dataset. Own calculations.

Tables for Appendix 1

Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home"		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Australia		
Father Working Class	reference category	
Father Out of Labor Force	1.84***	0.17
Father Farmer	0.52	0.47
Father Agricultural Workers	0.80**	0.32
Father Routine Nonmanuals	0.29	0.38
Father Service Class	-0.22	0.20
Mother Working Class	reference category	
Mother Out of Labor Force	1.09***	0.20
Mother Farmer	-13.27	813.97
Mother Agricultural Workers	-0.01	0.74
Mother Routine Nonmanuals	-0.28	0.23
Mother Service Class	-0.58**	0.23
Respondent Being a Girl	-0.24	0.13
Respondent Has Migration Background	-0.82***	0.22
Pseudo R-square	0.17	
Austria		
Father Working Class	reference category	
Father Out of Labor Force	0.64	0.37
Father Farmer	-13.47	1149.57
Father Agricultural Workers	-0.78	0.82
Father Routine Nonmanuals	-0.31	0.75
Father Service Class	-0.58	0.42
Mother Working Class	reference category	
Mother Out of Labor Force	0.46	0.40
Mother Farmer	-12.36	1735.43
Mother Agricultural Workers	0.52	0.72
Mother Routine Nonmanuals	-0.47	0.42
Mother Service Class	-0.35	0.49
Respondent Being a Girl	-0.26	0.30
Respondent Has Migration Background	0.20	0.39
Pseudo R-square	0.04	
Belgium		
Father Working Class	reference category	
Father Out of Labor Force	1.17***	0.27
Father Farmer	-13.20	1318.73
Father Agricultural Workers	0.70	0.61
Father Routine Nonmanuals	-0.44	0.53
Father Service Class	-1.04**	0.40
Mother Working Class	reference category	
Mother Out of Labor Force	0.64*	0.27
Mother Farmer	-12.50	1808.64
Mother Agricultural Workers	-14.27	6602.16
Mother Routine Nonmanuals	-0.95*	0.40
Mother Service Class	-1.09**	0.44
Respondent Being a Girl	-0.01	0.23
Respondent Has Migration Background	-0.10	0.29
Pseudo R-square	0.11	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-inthomeMiss-19-03-2012.smcl".

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Bulgaria		
Father Working Class	reference category	
Father Out of Labor Force	1.98***	.21
Father Farmer	-13.66	2055.16
Father Agricultural Workers	-14.07	1044.70
Father Routine Nonmanuals	0.31	.61
Father Service Class	-1.14*	.48
Mother Working Class	reference category	
Mother Out of Labor Force	1.67***	.25
Mother Farmer	-12.73	2038.53
Mother Agricultural Workers	.32	.76
Mother Routine Nonmanuals	-.16	.38
Mother Service Class	-.61	.38
Respondent Being a Girl	.02	.18
Respondent Has Migration Background	-13.82	3145.36
Pseudo R-square	0.31	
Canada		
Father Working Class	reference category	
Father Out of Labor Force	1.41***	.10
Father Farmer	-.84**	.31
Father Agricultural Workers	-.59	.45
Father Routine Nonmanuals	-.25	.31
Father Service Class	-.14	.12
Mother Working Class	reference category	
Mother Out of Labor Force	1.20***	.14
Mother Farmer	-.20	.73
Mother Agricultural Workers	-.91	1.01
Mother Routine Nonmanuals	-.10	.15
Mother Service Class	-.09	.15
Respondent Being a Girl	-.15	.09
Respondent Has Migration Background	-2.50***	.38
Pseudo R-square	0.12	
Chile		
Father Working Class	reference category	
Father Out of Labor Force	4.06***	.40
Father Farmer	-14.02	.
Father Agricultural Workers	.70	.81
Father Routine Nonmanuals	-.44	1.07
Father Service Class	.25	.63
Mother Working Class	reference category	
Mother Out of Labor Force	3.42***	.40
Mother Farmer	-12.33	.
Mother Agricultural Workers	-12.93	4773.15
Mother Routine Nonmanuals	-.92	1.07
Mother Service Class	1.07	.64
Respondent Being a Girl	-.41	.23
Respondent Has Migration Background	-15.63	2701.50
Pseudo R-square	0.51	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-inthomeMiss-19-03-2012.smcl".

Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Colombia		
Father Working Class	reference category	
Father Out of Labor Force	.51**	.17
Father Farmer	-.31	.47
Father Agricultural Workers	.33	.19
Father Routine Nonmanuals	.02	.25
Father Service Class	-.26	.18
Mother Working Class	reference category	
Mother Out of Labor Force	.11	.14
Mother Farmer	1.12	1.13
Mother Agricultural Workers	-.44	.73
Mother Routine Nonmanuals	-.73**	.25
Mother Service Class	-.78***	.23
Respondent Being a Girl	.16	.12
Respondent Has Migration Background	1.30*	.66
Pseudo R-square	0.03	
Croatia		
Father Working Class	reference category	
Father Out of Labor Force	.34	.23
Father Farmer	.37	.63
Father Agricultural Workers	.19	.38
Father Routine Nonmanuals	-.02	.34
Father Service Class	-.75**	.28
Mother Working Class	reference category	
Mother Out of Labor Force	.36	.20
Mother Farmer	1.40	1.13
Mother Agricultural Workers	.40	.61
Mother Routine Nonmanuals	-.99***	.26
Mother Service Class	-.74**	.30
Respondent Being a Girl	.22	.16
Respondent Has Migration Background	-.32	.27
Pseudo R-square	0.05	
The Czech Republic		
Father Working Class	reference category	
Father Out of Labor Force	.57	.32
Father Farmer	-14.17	1965.65
Father Agricultural Workers	-.27	1.04
Father Routine Nonmanuals	-14.04	1401.31
Father Service Class	-.66	.36
Mother Working Class	reference category	
Mother Out of Labor Force	1.24***	.35
Mother Farmer	-12.64	3220.27
Mother Agricultural Workers	.36	1.06
Mother Routine Nonmanuals	-.45	.41
Mother Service Class	-.31	.42
Respondent Being a Girl	-.10	.26
Respondent Has Migration Background	.91	.61
Pseudo R-square	0.08	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable “Possession of the Internet At Home” (continued)		
Missing on the “Possession of the Internet At Home”	Coef.	Standard Error
Denmark		
Father Working Class	reference category	
Father Out of Labor Force	1.10**	.41
Father Farmer	-12.79	4987.19
Father Agricultural Workers	-12.67	744.35
Father Routine Nonmanuals	.13	.77
Father Service Class	.19	.47
Mother Working Class	reference category	
Mother Out of Labor Force	.37	.42
Mother Farmer	-13.35	7978.12
Mother Agricultural Workers	-12.78	1226.86
Mother Routine Nonmanuals	-.70	.49
Mother Service Class	-.66	.52
Respondent Being a Girl	.20	.33
Respondent Has Migration Background	-.44	.61
Pseudo R-square	0.05	
Finland		
Father Working Class	reference category	
Father Out of Labor Force	1.56*	.71
Father Farmer	-13.00	.
Father Agricultural Workers	.93	1.16
Father Routine Nonmanuals	-13.18	1977.81
Father Service Class	.15	.83
Mother Working Class	reference category	
Mother Out of Labor Force	1.82**	.82
Mother Farmer	-12.41	.
Mother Agricultural Workers	-13.87	.
Mother Routine Nonmanuals	-.19	1.00
Mother Service Class	.06	.93
Respondent Being a Girl	-1.24	.65
Respondent Has Migration Background	-13.87	3140.10
Pseudo R-square	0.15	
Germany		
Father Working Class	reference category	
Father Out of Labor Force	2.28***	.20
Father Farmer	-9.44	1033.21
Father Agricultural Workers	-1.03	1.02
Father Routine Nonmanuals	-1.45	1.02
Father Service Class	-.52	.33
Mother Working Class	reference category	
Mother Out of Labor Force	1.65***	.21
Mother Farmer	omitted	omitted
Mother Agricultural Workers	.08	1.07
Mother Routine Nonmanuals	-.96**	.32
Mother Service Class	-1.03**	.41
Respondent Being a Girl	.07	.15
Respondent Has Migration Background	-1.37***	.27
Pseudo R-square	0.37	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Greece		
Father Working Class	reference category	
Father Out of Labor Force	.77**	.27
Father Farmer	.44	.38
Father Agricultural Workers	.25	.42
Father Routine Nonmanuals	-.17	.38
Father Service Class	-.92***	.25
Mother Working Class	reference category	
Mother Out of Labor Force	.05	.23
Mother Farmer	-14.39	1174.13
Mother Agricultural Workers	.54	.65
Mother Routine Nonmanuals	-.36	.31
Mother Service Class	-.43	.29
Respondent Being a Girl	.09	.18
Respondent Has Migration Background	-.42	.40
Pseudo R-square	0.04	
Hungary		
Father Working Class	reference category	
Father Out of Labor Force	.19	.27
Father Farmer	-13.49	1852.84
Father Agricultural Workers	.47	.48
Father Routine Nonmanuals	-1.29	1.01
Father Service Class	-.75	.42
Mother Working Class	reference category	
Mother Out of Labor Force	.30	.28
Mother Farmer	-12.77	4301.78
Mother Agricultural Workers	.18	.46
Mother Routine Nonmanuals	-.90**	.36
Mother Service Class	-.85*	.37
Respondent Being a Girl	-.58**	.23
Respondent Has Migration Background	-13.56	799.58
Pseudo R-square	0.06	
Iceland		
Father Working Class	reference category	
Father Out of Labor Force	3.35***	.62
Father Farmer	-14.30	.
Father Agricultural Workers	-14.67	.
Father Routine Nonmanuals	-14.11	3631.75
Father Service Class	-.02	.82
Mother Working Class	reference category	
Mother Out of Labor Force	2.57***	.75
Mother Farmer	-11.11	.
Mother Agricultural Workers	-12.72	.
Mother Routine Nonmanuals	-1.48	1.23
Mother Service Class	-.94	1.01
Respondent Being a Girl	-.82*	.40
Respondent Has Migration Background	-17.28	3305.92
Pseudo R-square	0.52	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Ireland		
Father Working Class	reference category	
Father Out of Labor Force	2.80***	.29
Father Farmer	-11.64	569.79
Father Agricultural Workers	.01	.56
Father Routine Nonmanuals	-.13	1.04
Father Service Class	-.24	.44
Mother Working Class	reference category	
Mother Out of Labor Force	1.60***	.32
Mother Farmer	-11.85	4668.09
Mother Agricultural Workers	-11.74	956.46
Mother Routine Nonmanuals	-1.25*	.54
Mother Service Class	-1.02*	.51
Respondent Being a Girl	.35	.22
Respondent Has Migration Background	-1.52*	.74
Pseudo R-square	0.38	
Italy		
Father Working Class	reference category	
Father Out of Labor Force	2.41***	.18
Father Farmer	-.01	1.01
Father Agricultural Workers	.46	.32
Father Routine Nonmanuals	.06	.31
Father Service Class	-.18	.23
Mother Working Class	reference category	
Mother Out of Labor Force	.95***	.22
Mother Farmer	-12.35	913.92
Mother Agricultural Workers	1.02	.63
Mother Routine Nonmanuals	-.36	.31
Mother Service Class	-.07	.30
Respondent Being a Girl	-.12	.15
Respondent Has Migration Background	-.42	.39
Pseudo R-square	0.12	
Japan		
Father Working Class	reference category	
Father Out of Labor Force	.58	.50
Father Farmer	omitted	
Father Agricultural Workers	1.10	1.08
Father Routine Nonmanuals	-.74	.69
Father Service Class	-.60	.64
Mother Working Class	reference category	
Mother Out of Labor Force	-.15	.63
Mother Farmer	omitted	
Mother Agricultural Workers	-14.28	.
Mother Routine Nonmanuals	-.55	.59
Mother Service Class	-.81	.78
Respondent Being a Girl	.02	.39
Respondent Has Migration Background	2.22*	1.06
Pseudo R-square	0.05	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable “Possession of the Internet At Home” (continued)		
Missing on the “Possession of the Internet At Home”	Coef.	Standard Error
Jordan		
Father Working Class	reference category	
Father Out of Labor Force	.17	.13
Father Farmer	-12.86	1017.31
Father Agricultural Workers	.59**	.23
Father Routine Nonmanuals	-.04	.25
Father Service Class	-.66***	.14
Mother Working Class	reference category	
Mother Out of Labor Force	-.01	.35
Mother Farmer	omitted	
Mother Agricultural Workers	-12.54	1137.33
Mother Routine Nonmanuals	-.64	.68
Mother Service Class	-.49	.38
Respondent Being a Girl	-.18	.10
Respondent Has Migration Background	-.45**	.16
Pseudo R-square	0.03	
Korea	The model did not converge	
Father Working Class	reference category	
Father Out of Labor Force		
Father Farmer		
Father Agricultural Workers		
Father Routine Nonmanuals		
Father Service Class		
Mother Working Class	reference category	
Mother Out of Labor Force		
Mother Farmer		
Mother Agricultural Workers		
Mother Routine Nonmanuals		
Mother Service Class		
Respondent Being a Girl		
Respondent Has Migration Background		
Pseudo R-square		
Latvia		
Father Working Class	reference category	
Father Out of Labor Force	.85**	.29
Father Farmer	.27	1.03
Father Agricultural Workers	.10	.55
Father Routine Nonmanuals	-.03	1.03
Father Service Class	-.64	.46
Mother Working Class	reference category	
Mother Out of Labor Force	.80*	.33
Mother Farmer	-14.10	3618.27
Mother Agricultural Workers	-14.06	1505.83
Mother Routine Nonmanuals	-.54	.39
Mother Service Class	-.54	.38
Respondent Being a Girl	.22	.25
Respondent Has Migration Background	-.24	.52
Pseudo R-square	0.07	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Lithuania		
Father Working Class	reference category	
Father Out of Labor Force	.56**	.21
Father Farmer	-.95	.77
Father Agricultural Workers	.37	.38
Father Routine Nonmanuals	.55	.47
Father Service Class	-1.14**	.36
Mother Working Class	reference category	
Mother Out of Labor Force	.52*	.23
Mother Farmer	.64	.78
Mother Agricultural Workers	-.31	1.02
Mother Routine Nonmanuals	-.46	.31
Mother Service Class	-.47	.25
Respondent Being a Girl	.05	.18
Respondent Has Migration Background	.02	.59
Pseudo R-square	0.05	
Macao		
Father Working Class	reference category	
Father Out of Labor Force	1.71***	.51
Father Farmer	omitted	
Father Agricultural Workers	-13.67	.
Father Routine Nonmanuals	-14.21	.
Father Service Class	-.58	.80
Mother Working Class	reference category	
Mother Out of Labor Force	.54	.52
Mother Farmer	omitted	
Mother Agricultural Workers	-13.42	6366.32
Mother Routine Nonmanuals	-.86	.80
Mother Service Class	-1.05	1.09
Respondent Being a Girl	.13	.46
Respondent Has Migration Background	-.69	.47
Pseudo R-square	0.11	
The Netherlands		
Father Working Class	reference category	
Father Out of Labor Force	3.24**	1.06
Father Farmer	-13.30	.
Father Agricultural Workers	-13.57	.
Father Routine Nonmanuals	1.34	1.42
Father Service Class	.47	1.25
Mother Working Class	reference category	
Mother Out of Labor Force	16.29	2593397
Mother Farmer	.73	.
Mother Agricultural Workers	.83	2593405
Mother Routine Nonmanuals	13.40	2593397
Mother Service Class	14.40	2593397
Respondent Being a Girl	.66	.58
Respondent Has Migration Background	-1.26	.80
Pseudo R-square	0.30	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
New Zealand		
Father Working Class	reference category	
Father Out of Labor Force	1.73***	.26
Father Farmer	-13.25	569.04
Father Agricultural Workers	.44	.51
Father Routine Nonmanuals	-.90	1.02
Father Service Class	-.72	.40
Mother Working Class	reference category	
Mother Out of Labor Force	1.14***	.29
Mother Farmer	-12.31	981.10
Mother Agricultural Workers	-.07	.78
Mother Routine Nonmanuals	-.98*	.46
Mother Service Class	-.76*	.37
Respondent Being a Girl	-.22	.22
Respondent Has Migration Background	-.79**	.32
Pseudo R-square	0.22	
Norway		
Father Working Class	reference category	
Father Out of Labor Force	2.12***	.32
Father Farmer	-13.33	2885.66
Father Agricultural Workers	-.68	1.04
Father Routine Nonmanuals	-.14	.64
Father Service Class	-.38	.39
Mother Working Class	reference category	
Mother Out of Labor Force	1.70***	.45
Mother Farmer	-12.77	6187.94
Mother Agricultural Workers	-13.46	1080.50
Mother Routine Nonmanuals	-1.54**	.61
Mother Service Class	-.54	.50
Respondent Being a Girl	-.47	.25
Respondent Has Migration Background	-1.21**	.49
Pseudo R-square	0.36	
Poland		
Father Working Class	reference category	
Father Out of Labor Force	.99***	.24
Father Farmer	-13.47	507.35
Father Agricultural Workers	.76**	.26
Father Routine Nonmanuals	-.84	.72
Father Service Class	-.46	.30
Mother Working Class	reference category	
Mother Out of Labor Force	.48	.25
Mother Farmer	4.19***	1.25
Mother Agricultural Workers	.18	.32
Mother Routine Nonmanuals	-.20	.26
Mother Service Class	-.48	.30
Respondent Being a Girl	-.20	.17
Respondent Has Migration Background	-15.52	.
Pseudo R-square	0.06	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Portugal		
Father Working Class	reference category	
Father Out of Labor Force	1.97***	.44
Father Farmer	-14.22	.
Father Agricultural Workers	.71	.79
Father Routine Nonmanuals	-.54	1.07
Father Service Class	-.50	.85
Mother Working Class	reference category	
Mother Out of Labor Force	1.29**	.49
Mother Farmer	-12.53	.
Mother Agricultural Workers	-14.12	.
Mother Routine Nonmanuals	-.19	.71
Mother Service Class	.55	.76
Respondent Being a Girl	-.19	.39
Respondent Has Migration Background	-14.58	1986.41
Pseudo R-square	0.13	
Qatar		
Father Working Class	reference category	
Father Out of Labor Force	.86***	.20
Father Farmer	omitted	
Father Agricultural Workers	-12.20	807.77
Father Routine Nonmanuals	-.74	.43
Father Service Class	-.49*	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.49	.39
Mother Farmer	omitted	
Mother Agricultural Workers	omitted	
Mother Routine Nonmanuals	-2.05	1.08
Mother Service Class	-.95*	.44
Respondent Being a Girl	-.60***	.10
Respondent Has Migration Background	-1.17***	.14
Pseudo R-square	0.14	
The Russian Federation		
Father Working Class	reference category	
Father Out of Labor Force	-.06	.20
Father Farmer	-13.18	1037.70
Father Agricultural Workers	.06	.35
Father Routine Nonmanuals	-1.26	1.01
Father Service Class	-.34	.19
Mother Working Class	reference category	
Mother Out of Labor Force	.60**	.24
Mother Farmer	-12.94	1845.62
Mother Agricultural Workers	-12.96	423.47
Mother Routine Nonmanuals	.28	.22
Mother Service Class	.05	.20
Respondent Being a Girl	-.23	.14
Respondent Has Migration Background	.13	.24
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Serbia		
Father Working Class	reference category	
Father Out of Labor Force	.70**	.22
Father Farmer	-.24	1.02
Father Agricultural Workers	-1.07	.72
Father Routine Nonmanuals	-.17	.32
Father Service Class	-.86***	.26
Mother Working Class	reference category	
Mother Out of Labor Force	.05	.20
Mother Farmer	-12.30	738.22
Mother Agricultural Workers	-12.19	603.56
Mother Routine Nonmanuals	-.90***	.26
Mother Service Class	-.87***	.26
Respondent Being a Girl	.43**	.16
Respondent Has Migration Background	-.24	.31
Pseudo R-square	0.06	
Slovakia		
Father Working Class	reference category	
Father Out of Labor Force	.17	.37
Father Farmer	-11.32	584.50
Father Agricultural Workers	.66	.64
Father Routine Nonmanuals	.05	.74
Father Service Class	-.32	.42
Mother Working Class	reference category	
Mother Out of Labor Force	.85*	.36
Mother Farmer	-12.10	2412.26
Mother Agricultural Workers	1.25	.79
Mother Routine Nonmanuals	-.50	.42
Mother Service Class	-.62	.50
Respondent Being a Girl	-.23	.28
Respondent Has Migration Background	-11.58	745.83
Pseudo R-square	0.04	
Slovenia		
Father Working Class	reference category	
Father Out of Labor Force	1.24***	.26
Father Farmer	-.16	.74
Father Agricultural Workers	1.06	.62
Father Routine Nonmanuals	.31	.53
Father Service Class	-1.04*	.53
Mother Working Class	reference category	
Mother Out of Labor Force	1.38***	.27
Mother Farmer	-11.92	464.62
Mother Agricultural Workers	-12.31	863.84
Mother Routine Nonmanuals	-.77	.43
Mother Service Class	-1.19*	.55
Respondent Being a Girl	-.23	.23
Respondent Has Migration Background	-.05	.34
Pseudo R-square	0.16	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Spain		
Father Working Class	reference category	
Father Out of Labor Force	1.78***	.16
Father Farmer	-11.23	762.46
Father Agricultural Workers	.33	.31
Father Routine Nonmanuals	-.04	.32
Father Service Class	-.57*	.23
Mother Working Class	reference category	
Mother Out of Labor Force	.83***	.17
Mother Farmer	-10.80	865.24
Mother Agricultural Workers	-.17	.73
Mother Routine Nonmanuals	.01	.22
Mother Service Class	-.78*	.33
Respondent Being a Girl	.10	.14
Respondent Has Migration Background	.38	.26
Pseudo R-square	0.09	
Sweden		
Father Working Class	reference category	
Father Out of Labor Force	3.24***	.62
Father Farmer	-12.13	1421.75
Father Agricultural Workers	1.61	1.19
Father Routine Nonmanuals	.71	1.16
Father Service Class	-.57	.92
Mother Working Class	reference category	
Mother Out of Labor Force	3.08***	.62
Mother Farmer	-8.48	2768.85
Mother Agricultural Workers	-12.81	1378.23
Mother Routine Nonmanuals	-1.15	1.16
Mother Service Class	.18	.77
Respondent Being a Girl	-.14	.35
Respondent Has Migration Background	-1.75**	.63
Pseudo R-square	0.49	
Switzerland		
Father Working Class	reference category	
Father Out of Labor Force	1.82***	.28
Father Farmer	omitted	
Father Agricultural Workers	-1.76	1.02
Father Routine Nonmanuals	-1.24	.73
Father Service Class	-.49	.32
Mother Working Class	reference category	
Mother Out of Labor Force	.89**	.30
Mother Farmer	omitted	
Mother Agricultural Workers	-.07	1.05
Mother Routine Nonmanuals	-.69	.37
Mother Service Class	-.87	.48
Respondent Being a Girl	-.71**	.26
Respondent Has Migration Background	-.42	.28
Pseudo R-square	0.13	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A2. Sensitivity Tests for the Missing Values On the Dummy Variable "Possession of the Internet At Home" (continued)		
Missing on the "Possession of the Internet At Home"	Coef.	Standard Error
Thailand		
Father Working Class	reference category	
Father Out of Labor Force	.81	.43
Father Farmer	-10.91	994.71
Father Agricultural Workers	-.06	.51
Father Routine Nonmanuals	-.47	.78
Father Service Class	-.45	.57
Mother Working Class	reference category	
Mother Out of Labor Force	.24	.46
Mother Farmer	-10.31	1204.80
Mother Agricultural Workers	-.22	.54
Mother Routine Nonmanuals	-.31	.54
Mother Service Class	-.84	.64
Respondent Being a Girl	-.50	.31
Respondent Has Migration Background	-11.09	643.02
Pseudo R-square	0.04	
Turkey		
Father Working Class	reference category	
Father Out of Labor Force	-.07	.37
Father Farmer	.57	.48
Father Agricultural Workers	-.05	.36
Father Routine Nonmanuals	-.50	.47
Father Service Class	-.43	.28
Mother Working Class	reference category	
Mother Out of Labor Force	-.40	.37
Mother Farmer	omitted	
Mother Agricultural Workers	-.13	1.10
Mother Routine Nonmanuals	-13.71	514.94
Mother Service Class	-.34	.58
Respondent Being a Girl	.18	.21
Respondent Has Migration Background	.82	.632
Pseudo R-square	0.02	
Uruguay		
Father Working Class	reference category	
Father Out of Labor Force	.96***	.16
Father Farmer	-.29	.72
Father Agricultural Workers	-.22	.27
Father Routine Nonmanuals	-.51	.28
Father Service Class	-1.24***	.28
Mother Working Class	reference category	
Mother Out of Labor Force	.48**	.16
Mother Farmer	2.47**	.79
Mother Agricultural Workers	-.53	1.02
Mother Routine Nonmanuals	-.11	.20
Mother Service Class	-.90**	.29
Respondent Being a Girl	-.16	.14
Respondent Has Migration Background	.91	.76
Pseudo R-square	0.09	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Australia		
Father Working Class	reference category	
Father Out of Labor Force	.73***	.10
Father Farmer	-.15	.29
Father Agricultural Workers	-.14	.22
Father Routine Nonmanuals	-.42	.23
Father Service Class	-.44***	.09
Mother Working Class	reference category	
Mother Out of Labor Force	.65***	.12
Mother Farmer	-.19	.76
Mother Agricultural Workers	-.08	.47
Mother Routine Nonmanuals	-.25*	.12
Mother Service Class	-.21	.11
Respondent Being a Girl	-.43***	.07
Respondent Has Migration Background	-.37***	.10
Pseudo R-square	0.05	
Austria		
Father Working Class	reference category	
Father Out of Labor Force	.29	.21
Father Farmer	.47	.75
Father Agricultural Workers	.45	.32
Father Routine Nonmanuals	-.25	.37
Father Service Class	-.29	.19
Mother Working Class	reference category	
Mother Out of Labor Force	.30	.21
Mother Farmer	-12.90	724.25
Mother Agricultural Workers	-.53	.43
Mother Routine Nonmanuals	-.36	.21
Mother Service Class	-.15	.23
Respondent Being a Girl	-.27	.15
Respondent Has Migration Background	.53**	.19
Pseudo R-square	0.03	
Belgium		
Father Working Class	reference category	
Father Out of Labor Force	.74***	.11
Father Farmer	.22	.50
Father Agricultural Workers	.63**	.23
Father Routine Nonmanuals	-.42*	.17
Father Service Class	-.26**	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.31**	.10
Mother Farmer	-1.08	1.08
Mother Agricultural Workers	-.13	.46
Mother Routine Nonmanuals	-.45***	.12
Mother Service Class	-.47***	.12
Respondent Being a Girl	-.19*	.08
Respondent Has Migration Background	.68***	.09
Pseudo R-square	0.06	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Bulgaria		
Father Working Class	reference category	
Father Out of Labor Force	.91***	.12
Father Farmer	-.01	.57
Father Agricultural Workers	.46*	.23
Father Routine Nonmanuals	-.14	.29
Father Service Class	-.28*	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.95***	.12
Mother Farmer	.84	.60
Mother Agricultural Workers	.37	.28
Mother Routine Nonmanuals	-.26	.15
Mother Service Class	-.65***	.14
Respondent Being a Girl	-.08	.09
Respondent Has Migration Background	1.32	.73
Pseudo R-square	0.10	
Canada		
Father Working Class	reference category	
Father Out of Labor Force	.58***	.06
Father Farmer	-.17	.11
Father Agricultural Workers	-.04	.17
Father Routine Nonmanuals	-.02	.12
Father Service Class	-.08	.05
Mother Working Class	reference category	
Mother Out of Labor Force	.52***	.07
Mother Farmer	.43	.23
Mother Agricultural Workers	.30	.26
Mother Routine Nonmanuals	-.03	.07
Mother Service Class	-.09	.06
Respondent Being a Girl	-.15***	.04
Respondent Has Migration Background	-.17*	.07
Pseudo R-square	0.02	
Chile		
Father Working Class	reference category	
Father Out of Labor Force	.92***	.10
Father Farmer	.01	.23
Father Agricultural Workers	.56***	.15
Father Routine Nonmanuals	.01	.14
Father Service Class	-.59***	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.40***	.09
Mother Farmer	1.15	1.25
Mother Agricultural Workers	.04	.63
Mother Routine Nonmanuals	-.33**	.12
Mother Service Class	-.56***	.16
Respondent Being a Girl	-.07	.08
Respondent Has Migration Background	.29	.56
Pseudo R-square	0.06	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Colombia		
Father Working Class	reference category	
Father Out of Labor Force	.31*	.13
Father Farmer	.31	.28
Father Agricultural Workers	.46***	.14
Father Routine Nonmanuals	.37*	.16
Father Service Class	-.24	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.24*	.11
Mother Farmer	.22	1.11
Mother Agricultural Workers	-.64	.60
Mother Routine Nonmanuals	-.29	.16
Mother Service Class	-.28	.15
Respondent Being a Girl	-.10	.09
Respondent Has Migration Background	.54	.65
Pseudo R-square	0.02	
Croatia		
Father Working Class	reference category	
Father Out of Labor Force	.19	.14
Father Farmer	.44	.39
Father Agricultural Workers	.32	.22
Father Routine Nonmanuals	.05	.17
Father Service Class	-.18	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.30**	.12
Mother Farmer	-11.80	371.61
Mother Agricultural Workers	-.07	.44
Mother Routine Nonmanuals	-.10	.11
Mother Service Class	-.39**	.14
Respondent Being a Girl	.11	.08
Respondent Has Migration Background	.04	.13
Pseudo R-square	0.01	
The Czech Republic		
Father Working Class	reference category	
Father Out of Labor Force	.30	.15
Father Farmer	-.57	.65
Father Agricultural Workers	.21	.34
Father Routine Nonmanuals	-.03	.28
Father Service Class	-.24*	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.74***	.16
Mother Farmer	1.63	.87
Mother Agricultural Workers	.14	.44
Mother Routine Nonmanuals	-.13	.14
Mother Service Class	-.29	.15
Respondent Being a Girl	.02	.10
Respondent Has Migration Background	.24	.34
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Denmark		
Father Working Class	reference category	
Father Out of Labor Force	.05	.15
Father Farmer	1.21	1.16
Father Agricultural Workers	-.06	.30
Father Routine Nonmanuals	-.32	.25
Father Service Class	-.15	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.29	.16
Mother Farmer	-11.39	773.07
Mother Agricultural Workers	.02	.75
Mother Routine Nonmanuals	.09	.15
Mother Service Class	.07	.17
Respondent Being a Girl	.13	.11
Respondent Has Migration Background	.52**	.17
Pseudo R-square	0.01	
Finland		
Father Working Class	reference category	
Father Out of Labor Force	.13	.23
Father Farmer	-12.46	1112.49
Father Agricultural Workers	-.0004	.37
Father Routine Nonmanuals	-.54	.52
Father Service Class	.06	.18
Mother Working Class	reference category	
Mother Out of Labor Force	.54*	.240
Mother Farmer	-12.86	2084.79
Mother Agricultural Workers	-1.28	.76
Mother Routine Nonmanuals	-.30	.21
Mother Service Class	-.45*	.22
Respondent Being a Girl	.09	.15
Respondent Has Migration Background	-1.21	1.01
Pseudo R-square	0.02	
Germany		
Father Working Class	reference category	
Father Out of Labor Force	1.24***	.11
Father Farmer	-10.24	516.27
Father Agricultural Workers	-.06	.35
Father Routine Nonmanuals	.33	.22
Father Service Class	-.50***	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.85***	.13
Mother Farmer	omitted	
Mother Agricultural Workers	-.11	.63
Mother Routine Nonmanuals	-.42**	.14
Mother Service Class	-.70***	.18
Respondent Being a Girl	-.001	.10
Respondent Has Migration Background	-.22	.14
Pseudo R-square	0.14	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Greece		
Father Working Class	reference category	
Father Out of Labor Force	.56**	.21
Father Farmer	-.25	.35
Father Agricultural Workers	.29	.29
Father Routine Nonmanuals	.30	.21
Father Service Class	-.16	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.01	.15
Mother Farmer	-.89	1.03
Mother Agricultural Workers	.43	.47
Mother Routine Nonmanuals	-.35	.19
Mother Service Class	-.32	.17
Respondent Being a Girl	-.11	.11
Respondent Has Migration Background	-.05	.22
Pseudo R-square	0.01	
Hungary		
Father Working Class	reference category	
Father Out of Labor Force	.70***	.16
Father Farmer	-12.44	634.52
Father Agricultural Workers	.26	.38
Father Routine Nonmanuals	.21	.34
Father Service Class	-.21	.21
Mother Working Class	reference category	
Mother Out of Labor Force	-.12	.20
Mother Farmer	-11.52	1449.23
Mother Agricultural Workers	.21	.32
Mother Routine Nonmanuals	-.41*	.20
Mother Service Class	-.24	.20
Respondent Being a Girl	-.18	.14
Respondent Has Migration Background	-.60	.72
Pseudo R-square	0.02	
Iceland		
Father Working Class	reference category	
Father Out of Labor Force	1.65***	.22
Father Farmer	1.58*	.77
Father Agricultural Workers	-.48	.44
Father Routine Nonmanuals	.05	.44
Father Service Class	.12	.21
Mother Working Class	reference category	
Mother Out of Labor Force	1.23***	.27
Mother Farmer	-9.18	657.87
Mother Agricultural Workers	.22	.79
Mother Routine Nonmanuals	-.09	.27
Mother Service Class	-.03	.26
Respondent Being a Girl	-.64***	.16
Respondent Has Migration Background	.19	.47
Pseudo R-square	0.12	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-skills2Miss-19-03-2012.smcl".

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Ireland		
Father Working Class	reference category	
Father Out of Labor Force	.83***	.12
Father Farmer	-.38	.47
Father Agricultural Workers	-.23	.17
Father Routine Nonmanuals	-.31	.29
Father Service Class	-.31**	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.42***	.12
Mother Farmer	-10.90	680.59
Mother Agricultural Workers	.59	.51
Mother Routine Nonmanuals	-.38**	.12
Mother Service Class	-.32**	.12
Respondent Being a Girl	-.26**	.08
Respondent Has Migration Background	.28	.17
Pseudo R-square	0.05	
Italy		
Father Working Class	reference category	
Father Out of Labor Force	.98***	.10
Father Farmer	.13	.32
Father Agricultural Workers	.17	.13
Father Routine Nonmanuals	-.13	.11
Father Service Class	-.25**	.08
Mother Working Class	reference category	
Mother Out of Labor Force	.40***	.08
Mother Farmer	-.03	.61
Mother Agricultural Workers	.54	.28
Mother Routine Nonmanuals	-.17	.10
Mother Service Class	-.10	.10
Respondent Being a Girl	-.15**	.06
Respondent Has Migration Background	.30*	.13
Pseudo R-square	0.02	
Japan		
Father Working Class	reference category	
Father Out of Labor Force	.23*	.10
Father Farmer	omitted	
Father Agricultural Workers	-.12	.27
Father Routine Nonmanuals	-.20*	.10
Father Service Class	-.17	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.08	.13
Mother Farmer	omitted	
Mother Agricultural Workers	-.02	.24
Mother Routine Nonmanuals	-.08	.12
Mother Service Class	.01	.14
Respondent Being a Girl	.25***	.07
Respondent Has Migration Background	-.13	.63
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Jordan		
Father Working Class	reference category	
Father Out of Labor Force	.20*	.10
Father Farmer	.58	1.13
Father Agricultural Workers	-.06	.23
Father Routine Nonmanuals	-.42	.22
Father Service Class	-.47***	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.07	.27
Mother Farmer	omitted	
Mother Agricultural Workers	-12.16	713.72
Mother Routine Nonmanuals	-.13	.46
Mother Service Class	-.24	.29
Respondent Being a Girl	-.46***	.08
Respondent Has Migration Background	-.29**	.11
Pseudo R-square	0.03	
Korea		
Father Working Class	reference category	
Father Out of Labor Force	.73	.51
Father Farmer	-.32	1.03
Father Agricultural Workers	.45	.92
Father Routine Nonmanuals	-.01	.40
Father Service Class	-.48	.33
Mother Working Class	reference category	
Mother Out of Labor Force	.62	.43
Mother Farmer	-11.69	431.17
Mother Agricultural Workers	1.17	1.15
Mother Routine Nonmanuals	-.24	.50
Mother Service Class	.20	.46
Respondent Being a Girl	-.43	.27
Respondent Has Migration Background	-11.97	4072.94
Pseudo R-square	0.03	
Latvia		
Father Working Class	reference category	
Father Out of Labor Force	.42*	.17
Father Farmer	-.02	.57
Father Agricultural Workers	-.04	.31
Father Routine Nonmanuals	.16	.47
Father Service Class	-.24	.21
Mother Working Class	reference category	
Mother Out of Labor Force	.40	.20
Mother Farmer	1.52**	.61
Mother Agricultural Workers	-.31	.53
Mother Routine Nonmanuals	-.17	.19
Mother Service Class	-.54**	.21
Respondent Being a Girl	-.37**	.14
Respondent Has Migration Background	.11	.24
Pseudo R-square	0.03	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Lithuania		
Father Working Class	reference category	
Father Out of Labor Force	.34**	.13
Father Farmer	.67**	.26
Father Agricultural Workers	-.01	.26
Father Routine Nonmanuals	.19	.31
Father Service Class	-.10	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.28	.15
Mother Farmer	-.16	.47
Mother Agricultural Workers	.46	.45
Mother Routine Nonmanuals	-.13	.16
Mother Service Class	-.28*	.13
Respondent Being a Girl	-.25**	.10
Respondent Has Migration Background	.27	.30
Pseudo R-square	0.02	
Macao		
Father Working Class	reference category	
Father Out of Labor Force	.61***	.17
Father Farmer	omitted	
Father Agricultural Workers	-.77	.74
Father Routine Nonmanuals	.001	.18
Father Service Class	.18	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.21	.13
Mother Farmer	omitted	
Mother Agricultural Workers	-.96	.74
Mother Routine Nonmanuals	-.09	.13
Mother Service Class	-.19	.16
Respondent Being a Girl	.23*	.09
Respondent Has Migration Background	-.01	.11
Pseudo R-square	0.01	
The Netherlands		
Father Working Class	reference category	
Father Out of Labor Force	.55***	.17
Father Farmer	-1.20	.63
Father Agricultural Workers	-.25	.47
Father Routine Nonmanuals	.09	.18
Father Service Class	-.39**	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.49**	.16
Mother Farmer	2.02*	.89
Mother Agricultural Workers	.03	.63
Mother Routine Nonmanuals	-.24	.15
Mother Service Class	-.33*	.17
Respondent Being a Girl	-.13	.11
Respondent Has Migration Background	.40**	.15
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
New Zealand		
Father Working Class	reference category	
Father Out of Labor Force	.64***	.16
Father Farmer	-.31	.39
Father Agricultural Workers	-.21	.32
Father Routine Nonmanuals	-.77	.42
Father Service Class	-.52**	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.91***	.20
Mother Farmer	-.40	1.04
Mother Agricultural Workers	.68	.40
Mother Routine Nonmanuals	-.17	.22
Mother Service Class	-.11	.20
Respondent Being a Girl	-.51***	.13
Respondent Has Migration Background	.05	.15
Pseudo R-square	0.07	
Norway		
Father Working Class	reference category	
Father Out of Labor Force	1.08***	.16
Father Farmer	-12.28	698.44
Father Agricultural Workers	-.02	.31
Father Routine Nonmanuals	-.19	.25
Father Service Class	-.36*	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.86***	.23
Mother Farmer	1.80	1.17
Mother Agricultural Workers	.003	.57
Mother Routine Nonmanuals	-.19	.22
Mother Service Class	-.05	.22
Respondent Being a Girl	-.07	.12
Respondent Has Migration Background	-.01	.21
Pseudo R-square	0.07	
Poland		
Father Working Class	reference category	
Father Out of Labor Force	.71***	.21
Father Farmer	-11.47	600.76
Father Agricultural Workers	.26	.25
Father Routine Nonmanuals	.02	.40
Father Service Class	-.49*	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.99***	.22
Mother Farmer	-11.01	841.78
Mother Agricultural Workers	.60*	.30
Mother Routine Nonmanuals	.02	.23
Mother Service Class	-.07	.26
Respondent Being a Girl	-.12	.15
Respondent Has Migration Background	-11.72	607.74
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Portugal		
Father Working Class	reference category	
Father Out of Labor Force	.63**	.22
Father Farmer	-10.92	579.30
Father Agricultural Workers	.06	.40
Father Routine Nonmanuals	.12	.26
Father Service Class	-.02	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.39*	.20
Mother Farmer	-10.73	1427.04
Mother Agricultural Workers	-.07	.73
Mother Routine Nonmanuals	-.07	.22
Mother Service Class	.29	.26
Respondent Being a Girl	-.30*	.15
Respondent Has Migration Background	.99***	.24
Pseudo R-square	0.02	
Qatar		
Father Working Class	reference category	
Father Out of Labor Force	.24*	.10
Father Farmer	omitted	
Father Agricultural Workers	-13.45	659.15
Father Routine Nonmanuals	-.28	.18
Father Service Class	-.24*	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.31	.23
Mother Farmer	omitted	
Mother Agricultural Workers	omitted	
Mother Routine Nonmanuals	-.14	.30
Mother Service Class	-.05	.24
Respondent Being a Girl	-.55***	.06
Respondent Has Migration Background	-.29***	.06
Pseudo R-square	0.04	
The Russian Federation		
Father Working Class	reference category	
Father Out of Labor Force	.21	.13
Father Farmer	-12.95	644.61
Father Agricultural Workers	-.34	.28
Father Routine Nonmanuals	-.12	.42
Father Service Class	-.56***	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.36*	.16
Mother Farmer	1.38	1.16
Mother Agricultural Workers	.59	.35
Mother Routine Nonmanuals	-.07	.14
Mother Service Class	-.35**	.14
Respondent Being a Girl	.06	.10
Respondent Has Migration Background	.06	.17
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Serbia		
Father Working Class	reference category	
Father Out of Labor Force	.27	.16
Father Farmer	-1.37	1.02
Father Agricultural Workers	.33	.26
Father Routine Nonmanuals	-.64**	.23
Father Service Class	-.20	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.003	.13
Mother Farmer	-12.86	616.79
Mother Agricultural Workers	.58	.80
Mother Routine Nonmanuals	-.45**	.14
Mother Service Class	-.79***	.15
Respondent Being a Girl	.20*	.10
Respondent Has Migration Background	-.16	.18
Pseudo R-square	0.03	
Slovakia		
Father Working Class	reference category	
Father Out of Labor Force	.54***	.14
Father Farmer	1.11*	.52
Father Agricultural Workers	-.41	.43
Father Routine Nonmanuals	.05	.30
Father Service Class	-.50**	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.50***	.15
Mother Farmer	-11.30	530.62
Mother Agricultural Workers	.38	.49
Mother Routine Nonmanuals	-.50***	.15
Mother Service Class	-.54**	.18
Respondent Being a Girl	-.20	.11
Respondent Has Migration Background	-.21	.79
Pseudo R-square	0.05	
Slovenia		
Father Working Class	reference category	
Father Out of Labor Force	.42**	.13
Father Farmer	-.07	.28
Father Agricultural Workers	-.23	.43
Father Routine Nonmanuals	-.34	.23
Father Service Class	-.70***	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.50***	.12
Mother Farmer	-.28	.48
Mother Agricultural Workers	-12.93	401.38
Mother Routine Nonmanuals	-.55***	.14
Mother Service Class	-.68***	.15
Respondent Being a Girl	-.76***	.10
Respondent Has Migration Background	.11	.14
Pseudo R-square	0.07	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Spain		
Father Working Class	reference category	
Father Out of Labor Force	.64***	.09
Father Farmer	-13.76	1002.06
Father Agricultural Workers	.41***	.12
Father Routine Nonmanuals	-.06	.12
Father Service Class	-.20**	.07
Mother Working Class	reference category	
Mother Out of Labor Force	.26***	.07
Mother Farmer	-13.42	1378.74
Mother Agricultural Workers	-.13	.27
Mother Routine Nonmanuals	-.09	.08
Mother Service Class	-.08	.09
Respondent Being a Girl	-.14*	.05
Respondent Has Migration Background	.91***	.10
Pseudo R-square	0.02	
Sweden		
Father Working Class	reference category	
Father Out of Labor Force	1.25***	.18
Father Farmer	-12.76	469.11
Father Agricultural Workers	.03	.47
Father Routine Nonmanuals	.23	.27
Father Service Class	-.11	.16
Mother Working Class	reference category	
Mother Out of Labor Force	1.10***	.20
Mother Farmer	-10.48	852.96
Mother Agricultural Workers	-1.00	1.03
Mother Routine Nonmanuals	-.02	.18
Mother Service Class	-.27	.19
Respondent Being a Girl	-.10	.13
Respondent Has Migration Background	-.19	.20
Pseudo R-square	0.08	
Switzerland		
Father Working Class	reference category	
Father Out of Labor Force	.66***	.15
Father Farmer	omitted	
Father Agricultural Workers	.25	.16
Father Routine Nonmanuals	-.01	.14
Father Service Class	-.33***	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.37**	.13
Mother Farmer	omitted	
Mother Agricultural Workers	.34	.28
Mother Routine Nonmanuals	.09	.11
Mother Service Class	.01	.14
Respondent Being a Girl	-.07	.08
Respondent Has Migration Background	.18	.10
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A3. Sensitivity Tests for the Missing Values on the HIGHCONF (Skills) Index (continued)		
Missing on the "HIGHCONF (Skills) Index"	Coef.	Standard Error
Thailand		
Father Working Class	reference category	
Father Out of Labor Force	.40*	.19
Father Farmer	-12.11	682.05
Father Agricultural Workers	-.03	.20
Father Routine Nonmanuals	-.25	.27
Father Service Class	-.53*	.21
Mother Working Class	reference category	
Mother Out of Labor Force	.17	.20
Mother Farmer	-11.30	816.29
Mother Agricultural Workers	-.28	.22
Mother Routine Nonmanuals	-.13	.21
Mother Service Class	-.39	.23
Respondent Being a Girl	-.14	.13
Respondent Has Migration Background	.95	.75
Pseudo R-square	0.02	
Turkey		
Father Working Class	reference category	
Father Out of Labor Force	.27*	.14
Father Farmer	.49*	.22
Father Agricultural Workers	.48***	.13
Father Routine Nonmanuals	-.35*	.18
Father Service Class	-.38***	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.33	.20
Mother Farmer	omitted	
Mother Agricultural Workers	.44	.45
Mother Routine Nonmanuals	-.64	.43
Mother Service Class	-.40	.31
Respondent Being a Girl	.54***	.08
Respondent Has Migration Background	-.11	.44
Pseudo R-square	0.03	
Uruguay		
Father Working Class	reference category	
Father Out of Labor Force	.47***	.10
Father Farmer	-.14	.42
Father Agricultural Workers	.35**	.13
Father Routine Nonmanuals	-.35**	.14
Father Service Class	-.44***	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.28**	.09
Mother Farmer	-.74	1.07
Mother Agricultural Workers	-.91	.53
Mother Routine Nonmanuals	-.10	.10
Mother Service Class	-.74***	.13
Respondent Being a Girl	-.003	.07
Respondent Has Migration Background	-.74	.75
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Australia		
Father Working Class	reference category	
Father Out of Labor Force	.76***	.10
Father Farmer	-.59	.37
Father Agricultural Workers	-.29	.25
Father Routine Nonmanuals	-.48	.25
Father Service Class	-.33***	.09
Mother Working Class	reference category	
Mother Out of Labor Force	.63***	.12
Mother Farmer	-.53	1.04
Mother Agricultural Workers	-.54	.59
Mother Routine Nonmanuals	-.35**	.13
Mother Service Class	-.25*	.12
Respondent Being a Girl	-.35***	.08
Respondent Has Migration Background	-.38***	.11
Pseudo R-square	0.05	
Austria		
Father Working Class	reference category	
Father Out of Labor Force	.72**	.24
Father Farmer	-13.53	1142.49
Father Agricultural Workers	.46	.42
Father Routine Nonmanuals	-.15	.47
Father Service Class	-.06	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.41	.25
Mother Farmer	-13.56	1800.22
Mother Agricultural Workers	-.90	.65
Mother Routine Nonmanuals	-.51	.27
Mother Service Class	-.11	.28
Respondent Being a Girl	-.54**	.19
Respondent Has Migration Background	.69**	.22
Pseudo R-square	0.05	
Belgium		
Father Working Class	reference category	
Father Out of Labor Force	.80***	.12
Father Farmer	-.04	.59
Father Agricultural Workers	.83***	.24
Father Routine Nonmanuals	-.43*	.19
Father Service Class	-.39***	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.39***	.11
Mother Farmer	.07	.84
Mother Agricultural Workers	-.16	.50
Mother Routine Nonmanuals	-.43***	.13
Mother Service Class	-.53***	.14
Respondent Being a Girl	-.26**	.09
Respondent Has Migration Background	.63***	.11
Pseudo R-square	0.07	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Bulgaria		
Father Working Class	reference category	
Father Out of Labor Force	.90***	.12
Father Farmer	.44	.52
Father Agricultural Workers	.41	.24
Father Routine Nonmanuals	.06	.27
Father Service Class	-.28*	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.99***	.12
Mother Farmer	.33	.67
Mother Agricultural Workers	.23	.29
Mother Routine Nonmanuals	-.31*	.15
Mother Service Class	-.89***	.15
Respondent Being a Girl	-.12	.09
Respondent Has Migration Background	.72	.83
Pseudo R-square	0.12	
Canada		
Father Working Class	reference category	
Father Out of Labor Force	.63***	.06
Father Farmer	-.23*	.11
Father Agricultural Workers	.09	.16
Father Routine Nonmanuals	-.03	.13
Father Service Class	-.09	.05
Mother Working Class	reference category	
Mother Out of Labor Force	.47***	.07
Mother Farmer	.41	.24
Mother Agricultural Workers	.01	.29
Mother Routine Nonmanuals	-.06	.07
Mother Service Class	-.08	.06
Respondent Being a Girl	-.10*	.04
Respondent Has Migration Background	-.33***	.08
Pseudo R-square	0.02	
Chile		
Father Working Class	reference category	
Father Out of Labor Force	1.18***	.11
Father Farmer	.07	.26
Father Agricultural Workers	.65***	.16
Father Routine Nonmanuals	.12	.15
Father Service Class	-.42**	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.50***	.10
Mother Farmer	1.40	1.25
Mother Agricultural Workers	-.08	.75
Mother Routine Nonmanuals	-.34*	.14
Mother Service Class	-.33*	.16
Respondent Being a Girl	-.19*	.09
Respondent Has Migration Background	.17	.63
Pseudo R-square	0.06	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Colombia		
Father Working Class	reference category	
Father Out of Labor Force	.52***	.13
Father Farmer	.21	.30
Father Agricultural Workers	.59***	.14
Father Routine Nonmanuals	.33*	.17
Father Service Class	-.19	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.30**	.11
Mother Farmer	.33	1.11
Mother Agricultural Workers	.36	.42
Mother Routine Nonmanuals	-.34*	.17
Mother Service Class	-.50**	.16
Respondent Being a Girl	-.16	.09
Respondent Has Migration Background	.07	.77
Pseudo R-square	0.03	
Croatia		
Father Working Class	reference category	
Father Out of Labor Force	.54***	.13
Father Farmer	-.15	.53
Father Agricultural Workers	.19	.25
Father Routine Nonmanuals	.11	.17
Father Service Class	.06	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.23	.12
Mother Farmer	-12.76	731.60
Mother Agricultural Workers	.24	.41
Mother Routine Nonmanuals	-.15	.12
Mother Service Class	-.35*	.14
Respondent Being a Girl	.13	.09
Respondent Has Migration Background	-.0001	.14
Pseudo R-square	0.01	
The Czech Republic		
Father Working Class	reference category	
Father Out of Labor Force	.25	.16
Father Farmer	-.63	.75
Father Agricultural Workers	.81**	.30
Father Routine Nonmanuals	-.14	.31
Father Service Class	-.09	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.67***	.17
Mother Farmer	.83	1.12
Mother Agricultural Workers	-.37	.53
Mother Routine Nonmanuals	-.02	.14
Mother Service Class	-.31*	.16
Respondent Being a Girl	-.01	.10
Respondent Has Migration Background	.58	.31
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-educuse2Miss-19-03-2012.smcl".

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Denmark		
Father Working Class	reference category	
Father Out of Labor Force	-.06	.16
Father Farmer	-12.95	1066.10
Father Agricultural Workers	-.07	.33
Father Routine Nonmanuals	-.73*	.32
Father Service Class	-.37*	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.56**	.19
Mother Farmer	-12.33	1626.76
Mother Agricultural Workers	.48	.76
Mother Routine Nonmanuals	.40*	.18
Mother Service Class	.38	.19
Respondent Being a Girl	.07	.12
Respondent Has Migration Background	.74***	.19
Pseudo R-square	0.02	
Finland		
Father Working Class	reference category	
Father Out of Labor Force	.64*	.26
Father Farmer	-10.65	619.04
Father Agricultural Workers	-.49	.63
Father Routine Nonmanuals	-.17	.60
Father Service Class	-.12	.26
Mother Working Class	reference category	
Mother Out of Labor Force	.40	.31
Mother Farmer	-10.87	1158.46
Mother Agricultural Workers	-1.07	1.06
Mother Routine Nonmanuals	-.39	.29
Mother Service Class	-.38	.28
Respondent Being a Girl	.07	.20
Respondent Has Migration Background	.10	.73
Pseudo R-square	0.02	
Germany		
Father Working Class	reference category	
Father Out of Labor Force	1.31***	.12
Father Farmer	-9.44	430.54
Father Agricultural Workers	-.21	.39
Father Routine Nonmanuals	.06	.27
Father Service Class	-.50**	.17
Mother Working Class	reference category	
Mother Out of Labor Force	1.15***	.14
Mother Farmer	omitted	
Mother Agricultural Workers	.57	.57
Mother Routine Nonmanuals	-.54***	.17
Mother Service Class	-.55**	.20
Respondent Being a Girl	-.21*	.10
Respondent Has Migration Background	-.15	.14
Pseudo R-square	0.18	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Greece		
Father Working Class	reference category	
Father Out of Labor Force	.77***	.21
Father Farmer	-.54	.43
Father Agricultural Workers	.36	.31
Father Routine Nonmanuals	.42	.22
Father Service Class	-.14	.15
Mother Working Class	reference category	
Mother Out of Labor Force	-.32***	.16
Mother Farmer	.39	.64
Mother Agricultural Workers	.22	.50
Mother Routine Nonmanuals	-.47*	.20
Mother Service Class	-.49**	.18
Respondent Being a Girl	-.13	.12
Respondent Has Migration Background	.06	.23
Pseudo R-square	0.02	
Hungary		
Father Working Class	reference category	
Father Out of Labor Force	.30	.19
Father Farmer	.68	1.05
Father Agricultural Workers	.11	.40
Father Routine Nonmanuals	-.01	.40
Father Service Class	-.49	.26
Mother Working Class	reference category	
Mother Out of Labor Force	.27	.21
Mother Farmer	-11.25	721.20
Mother Agricultural Workers	.52	.31
Mother Routine Nonmanuals	-.65**	.24
Mother Service Class	-.40	.23
Respondent Being a Girl	-.39**	.15
Respondent Has Migration Background	-1.06	1.01
Pseudo R-square	0.03	
Iceland		
Father Working Class	reference category	
Father Out of Labor Force	1.53***	.23
Father Farmer	-12.77	904.62
Father Agricultural Workers	-.43	.44
Father Routine Nonmanuals	.17	.45
Father Service Class	-.02	.22
Mother Working Class	reference category	
Mother Out of Labor Force	1.26***	.28
Mother Farmer	-12.54	3842.77
Mother Agricultural Workers	.21	.80
Mother Routine Nonmanuals	-.26	.29
Mother Service Class	-.15	.28
Respondent Being a Girl	-.65***	.18
Respondent Has Migration Background	-.17	.56
Pseudo R-square	0.12	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-educuse2Miss-19-03-2012.smcl".

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Ireland		
Father Working Class	reference category	
Father Out of Labor Force	1.17***	.14
Father Farmer	-.33	.60
Father Agricultural Workers	-.55*	.24
Father Routine Nonmanuals	-1.07*	.51
Father Service Class	-.29*	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.58***	.15
Mother Farmer	-10.03	583.97
Mother Agricultural Workers	.33	.75
Mother Routine Nonmanuals	-.26	.16
Mother Service Class	-.41**	.16
Respondent Being a Girl	-.10	.10
Respondent Has Migration Background	.35	.20
Pseudo R-square	0.08	
Italy		
Father Working Class	reference category	
Father Out of Labor Force	1.09***	.11
Father Farmer	.10	.37
Father Agricultural Workers	.20	.14
Father Routine Nonmanuals	.01	.11
Father Service Class	-.18*	.08
Mother Working Class	reference category	
Mother Out of Labor Force	.58***	.09
Mother Farmer	-.85	1.02
Mother Agricultural Workers	.28	.35
Mother Routine Nonmanuals	-.16	.11
Mother Service Class	-.08	.11
Respondent Being a Girl	-.16**	.06
Respondent Has Migration Background	.44***	.13
Pseudo R-square	0.03	
Japan		
Father Working Class	reference category	
Father Out of Labor Force	.33***	.10
Father Farmer	omitted	
Father Agricultural Workers	-.09	.27
Father Routine Nonmanuals	-.17	.10
Father Service Class	-.14	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.08	.14
Mother Farmer	omitted	
Mother Agricultural Workers	-.12	.25
Mother Routine Nonmanuals	-.08	.12
Mother Service Class	.02	.14
Respondent Being a Girl	.23***	.07
Respondent Has Migration Background	-.14	.63
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Jordan		
Father Working Class	reference category	
Father Out of Labor Force	.42***	.11
Father Farmer	.86	1.13
Father Agricultural Workers	.24	.23
Father Routine Nonmanuals	.09	.21
Father Service Class	-.32**	.11
Mother Working Class	reference category	
Mother Out of Labor Force	-.19	.26
Mother Farmer	omitted	
Mother Agricultural Workers	1.18	1.19
Mother Routine Nonmanuals	-.30	.45
Mother Service Class	-.55	.28
Respondent Being a Girl	-.60***	.08
Respondent Has Migration Background	-.34**	.12
Pseudo R-square	0.03	
Korea		
Father Working Class	reference category	
Father Out of Labor Force	1.53***	.45
Father Farmer	-14.31	2311.05
Father Agricultural Workers	-2.26	1.43
Father Routine Nonmanuals	.40	.40
Father Service Class	.16	.33
Mother Working Class	reference category	
Mother Out of Labor Force	.73	.50
Mother Farmer	-11.79	1434.75
Mother Agricultural Workers	3.85***	1.15
Mother Routine Nonmanuals	.53	.52
Mother Service Class	.84	.50
Respondent Being a Girl	-.41	.25
Respondent Has Migration Background	-14.05	.
Pseudo R-square	0.04	
Latvia		
Father Working Class	reference category	
Father Out of Labor Force	.29	.18
Father Farmer	.48	.53
Father Agricultural Workers	-.24	.34
Father Routine Nonmanuals	-.33	.59
Father Service Class	-.47*	.22
Mother Working Class	reference category	
Mother Out of Labor Force	.57**	.21
Mother Farmer	-12.58	508.72
Mother Agricultural Workers	-.42	.60
Mother Routine Nonmanuals	-.04	.20
Mother Service Class	-.44*	.22
Respondent Being a Girl	-.36*	.15
Respondent Has Migration Background	.02	.26
Pseudo R-square	0.03	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Lithuania		
Father Working Class	reference category	
Father Out of Labor Force	.13	.19
Father Farmer	-.27	.52
Father Agricultural Workers	-.11	.37
Father Routine Nonmanuals	.29	.40
Father Service Class	-.39*	.20
Mother Working Class	reference category	
Mother Out of Labor Force	.28	.21
Mother Farmer	-13.15	506.39
Mother Agricultural Workers	1.10*	.49
Mother Routine Nonmanuals	-.11	.23
Mother Service Class	-.10	.18
Respondent Being a Girl	-.29*	.14
Respondent Has Migration Background	.53	.37
Pseudo R-square	0.02	
Macao		
Father Working Class	reference category	
Father Out of Labor Force	.42*	.20
Father Farmer	omitted	
Father Agricultural Workers	.06	.55
Father Routine Nonmanuals	.02	.20
Father Service Class	.26	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.32*	.14
Mother Farmer	omitted	
Mother Agricultural Workers	-.56	.63
Mother Routine Nonmanuals	-.25	.15
Mother Service Class	-.15	.17
Respondent Being a Girl	.06	.10
Respondent Has Migration Background	-.13	.12
Pseudo R-square	0.01	
The Netherlands		
Father Working Class	reference category	
Father Out of Labor Force	.67***	.17
Father Farmer	-.53	.50
Father Agricultural Workers	-.75	.59
Father Routine Nonmanuals	-.32	.21
Father Service Class	-.63***	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.47**	.17
Mother Farmer	-12.41	777.30
Mother Agricultural Workers	.31	.57
Mother Routine Nonmanuals	-.28	.16
Mother Service Class	-.19	.18
Respondent Being a Girl	.02	.11
Respondent Has Migration Background	.10	.16
Pseudo R-square	0.05	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
New Zealand		
Father Working Class	reference category	
Father Out of Labor Force	.93***	.17
Father Farmer	-.43	.47
Father Agricultural Workers	-1.03*	.52
Father Routine Nonmanuals	-.41	.40
Father Service Class	-.27	.18
Mother Working Class	reference category	
Mother Out of Labor Force	1.02***	.21
Mother Farmer	-12.36	490.75
Mother Agricultural Workers	.47	.50
Mother Routine Nonmanuals	.03	.24
Mother Service Class	-.09	.22
Respondent Being a Girl	-.39**	.14
Respondent Has Migration Background	.25	.15
Pseudo R-square	0.08	
Norway		
Father Working Class	reference category	
Father Out of Labor Force	1.14***	.17
Father Farmer	1.17	1.12
Father Agricultural Workers	-.11	.35
Father Routine Nonmanuals	-.20	.28
Father Service Class	-.44**	.17
Mother Working Class	reference category	
Mother Out of Labor Force	1.12***	.26
Mother Farmer	2.24	1.18
Mother Agricultural Workers	.43	.58
Mother Routine Nonmanuals	.05	.25
Mother Service Class	.01	.26
Respondent Being a Girl	-.19	.13
Respondent Has Migration Background	.03	.23
Pseudo R-square	0.09	
Poland		
Father Working Class	reference category	
Father Out of Labor Force	.94***	.21
Father Farmer	-11.95	826.93
Father Agricultural Workers	.43	.26
Father Routine Nonmanuals	-.01	.43
Father Service Class	-.22	.23
Mother Working Class	reference category	
Mother Out of Labor Force	.52*	.23
Mother Farmer	-11.60	1103.49
Mother Agricultural Workers	.36	.30
Mother Routine Nonmanuals	.04	.22
Mother Service Class	-.25	.26
Respondent Being a Girl	-.03	.15
Respondent Has Migration Background	-12.33	797.50
Pseudo R-square	0.03	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Portugal		
Father Working Class	reference category	
Father Out of Labor Force	.83***	.21
Father Farmer	-10.31	426.35
Father Agricultural Workers	.35	.36
Father Routine Nonmanuals	-.18	.32
Father Service Class	.27	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.20	.19
Mother Farmer	-10.46	1065.42
Mother Agricultural Workers	-1.06	1.01
Mother Routine Nonmanuals	-.69**	.24
Mother Service Class	-.34	.28
Respondent Being a Girl	-.06	.15
Respondent Has Migration Background	.52	.28
Pseudo R-square	0.03	
Qatar		
Father Working Class	reference category	
Father Out of Labor Force	.50***	.14
Father Farmer	omitted	
Father Agricultural Workers	-12.45	635.50
Father Routine Nonmanuals	-.28	.25
Father Service Class	-.04	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.45	.32
Mother Farmer	omitted	
Mother Agricultural Workers	omitted	
Mother Routine Nonmanuals	.12	.41
Mother Service Class	-.09	.33
Respondent Being a Girl	-.79***	.07
Respondent Has Migration Background	-.56***	.08
Pseudo R-square	0.06	
The Russian Federation		
Father Working Class	reference category	
Father Out of Labor Force	.24	.13
Father Farmer	-13.16	751.62
Father Agricultural Workers	-.16	.27
Father Routine Nonmanuals	-.74	.59
Father Service Class	-.58***	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.39*	.16
Mother Farmer	1.40	1.16
Mother Agricultural Workers	-.14	.47
Mother Routine Nonmanuals	-.05	.15
Mother Service Class	-.55***	.14
Respondent Being a Girl	.01	.10
Respondent Has Migration Background	.02	.18
Pseudo R-square	0.03	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Serbia		
Father Working Class	reference category	
Father Out of Labor Force	.40*	.19
Father Farmer	-.84	1.02
Father Agricultural Workers	.12	.33
Father Routine Nonmanuals	-.66*	.30
Father Service Class	-.35*	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.13	.15
Mother Farmer	-12.80	765.68
Mother Agricultural Workers	-12.81	643.03
Mother Routine Nonmanuals	-.81***	.20
Mother Service Class	-.77***	.19
Respondent Being a Girl	.23	.12
Respondent Has Migration Background	-.18	.23
Pseudo R-square	0.04	
Slovakia		
Father Working Class	reference category	
Father Out of Labor Force	.41*	.19
Father Farmer	1.61**	.59
Father Agricultural Workers	-.13	.52
Father Routine Nonmanuals	-.30	.46
Father Service Class	-.59*	.24
Mother Working Class	reference category	
Mother Out of Labor Force	1.17***	.20
Mother Farmer	-9.97	467.24
Mother Agricultural Workers	.30	.74
Mother Routine Nonmanuals	-.22	.22
Mother Service Class	-.40	.27
Respondent Being a Girl	-.36*	.15
Respondent Has Migration Background	-.78	1.15
Pseudo R-square	0.07	
Slovenia		
Father Working Class	reference category	
Father Out of Labor Force	.40**	.14
Father Farmer	-.26	.30
Father Agricultural Workers	-.18	.43
Father Routine Nonmanuals	-.23	.23
Father Service Class	-.61***	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.55***	.13
Mother Farmer	.23	.42
Mother Agricultural Workers	-13.53	552.43
Mother Routine Nonmanuals	-.52***	.14
Mother Service Class	-.70***	.15
Respondent Being a Girl	-.90***	.11
Respondent Has Migration Background	.16	.14
Pseudo R-square	0.07	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Spain		
Father Working Class	reference category	
Father Out of Labor Force	.57***	.10
Father Farmer	.27	1.05
Father Agricultural Workers	.30*	.13
Father Routine Nonmanuals	-.01	.12
Father Service Class	-.15	.08
Mother Working Class	reference category	
Mother Out of Labor Force	.24**	.07
Mother Farmer	-12.37	773.22
Mother Agricultural Workers	-.41	.33
Mother Routine Nonmanuals	-.13	.09
Mother Service Class	-.22*	.10
Respondent Being a Girl	-.20***	.06
Respondent Has Migration Background	.85***	.10
Pseudo R-square	0.02	
Sweden		
Father Working Class	reference category	
Father Out of Labor Force	1.32***	.20
Father Farmer	-.22	1.04
Father Agricultural Workers	-1.46	1.02
Father Routine Nonmanuals	.11	.33
Father Service Class	-.10	.18
Mother Working Class	reference category	
Mother Out of Labor Force	.98***	.22
Mother Farmer	-11.19	529.08
Mother Agricultural Workers	.48	.64
Mother Routine Nonmanuals	-.53*	.22
Mother Service Class	-.21	.20
Respondent Being a Girl	-.22	.14
Respondent Has Migration Background	-.23	.23
Pseudo R-square	0.09	
Switzerland		
Father Working Class	reference category	
Father Out of Labor Force	.87***	.16
Father Farmer	omitted	
Father Agricultural Workers	.16	.20
Father Routine Nonmanuals	-.15	.18
Father Service Class	-.32**	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.28*	.14
Mother Farmer	omitted	
Mother Agricultural Workers	.16	.32
Mother Routine Nonmanuals	-.25	.13
Mother Service Class	-.23	.16
Respondent Being a Girl	-.03	.10
Respondent Has Migration Background	.09	.11
Pseudo R-square	0.02	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

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Table A4. Sensitivity Tests for the Missing Values on the EDUCUSE (ICT/Internet Educational Use) Index (continued)		
Missing on the "EDUCUSE Index"	Coef.	Standard Error
Thailand		
Father Working Class	reference category	
Father Out of Labor Force	.170	.27
Father Farmer	-12.57	1094.04
Father Agricultural Workers	-.08	.27
Father Routine Nonmanuals	-.18	.32
Father Service Class	-.61*	.27
Mother Working Class	reference category	
Mother Out of Labor Force	.001	.28
Mother Farmer	-11.61	1304.01
Mother Agricultural Workers	-.36	.30
Mother Routine Nonmanuals	.08	.27
Mother Service Class	-.09	.29
Respondent Being a Girl	-.25	.17
Respondent Has Migration Background	-12.75	846.82
Pseudo R-square	0.01	
Turkey		
Father Working Class	reference category	
Father Out of Labor Force	.23	.15
Father Farmer	.52*	.23
Father Agricultural Workers	.45***	.14
Father Routine Nonmanuals	-.21	.18
Father Service Class	-.32**	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.42***	.21
Mother Farmer	omitted	
Mother Agricultural Workers	.10	.53
Mother Routine Nonmanuals	-.82	.50
Mother Service Class	-.75*	.37
Respondent Being a Girl	.50***	.09
Respondent Has Migration Background	-.14	.47
Pseudo R-square	0.03	
Uruguay		
Father Working Class	reference category	
Father Out of Labor Force	.56***	.11
Father Farmer	-.38	.48
Father Agricultural Workers	.40**	.14
Father Routine Nonmanuals	-.22	.14
Father Service Class	-.46***	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.25**	.10
Mother Farmer	-.43	1.08
Mother Agricultural Workers	-.26	.45
Mother Routine Nonmanuals	-.04	.11
Mother Service Class	-.59***	.13
Respondent Being a Girl	-.09	.08
Respondent Has Migration Background	.25	.56
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-educuse2Miss-19-03-2012.smcl".

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Tables for Appendix 1

Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Australia		
Father Working Class	reference category	
Father Out of Labor Force	.87***	.11
Father Farmer	-.25	.35
Father Agricultural Workers	-.24	.28
Father Routine Nonmanuals	-.77*	.32
Father Service Class	-.40***	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.80***	.14
Mother Farmer	-.44	1.04
Mother Agricultural Workers	-.63	.72
Mother Routine Nonmanuals	-.27	.15
Mother Service Class	-.13	.14
Respondent Being a Girl	-.53***	.09
Respondent Has Migration Background	-.37**	.12
Pseudo R-square	0.07	
Austria		
Father Working Class	reference category	
Father Out of Labor Force	.95***	.26
Father Farmer	-12.16	713.84
Father Agricultural Workers	.48	.50
Father Routine Nonmanuals	-.001	.53
Father Service Class	.18	.27
Mother Working Class	reference category	
Mother Out of Labor Force	.37	.27
Mother Farmer	-12.61	1246.60
Mother Agricultural Workers	-1.77	1.06
Mother Routine Nonmanuals	-.41	.28
Mother Service Class	-.69*	.35
Respondent Being a Girl	-.41*	.21
Respondent Has Migration Background	.76**	.24
Pseudo R-square	0.05	
Belgium		
Father Working Class	reference category	
Father Out of Labor Force	.81***	.13
Father Farmer	.02	.65
Father Agricultural Workers	.72**	.27
Father Routine Nonmanuals	-.49*	.22
Father Service Class	-.44***	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.39***	.12
Mother Farmer	-.49	1.12
Mother Agricultural Workers	-.15	.55
Mother Routine Nonmanuals	-.59***	.15
Mother Service Class	-.58***	.16
Respondent Being a Girl	-.24*	.10
Respondent Has Migration Background	.62***	.12
Pseudo R-square	0.08	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Bulgaria		
Father Working Class	reference category	
Father Out of Labor Force	.98***	.13
Father Farmer	.28	.59
Father Agricultural Workers	.51*	.26
Father Routine Nonmanuals	.25	.29
Father Service Class	-.22	.16
Mother Working Class	reference category	
Mother Out of Labor Force	1.23***	.13
Mother Farmer	1.13	.61
Mother Agricultural Workers	.58	.30
Mother Routine Nonmanuals	-.31	.18
Mother Service Class	-.94***	.18
Respondent Being a Girl	-.06	.10
Respondent Has Migration Background	.98	.84
Pseudo R-square	0.15	
Canada		
Father Working Class	reference category	
Father Out of Labor Force	.65***	.06
Father Farmer	-.30*	.12
Father Agricultural Workers	.02	.18
Father Routine Nonmanuals	.02	.13
Father Service Class	-.11	.06
Mother Working Class	reference category	
Mother Out of Labor Force	.51***	.08
Mother Farmer	.55*	.25
Mother Agricultural Workers	.03	.32
Mother Routine Nonmanuals	-.04	.07
Mother Service Class	-.07	.07
Respondent Being a Girl	-.11*	.05
Respondent Has Migration Background	-.30***	.08
Pseudo R-square	0.02	
Chile		
Father Working Class	reference category	
Father Out of Labor Force	1.30***	.12
Father Farmer	.15	.28
Father Agricultural Workers	.80***	.17
Father Routine Nonmanuals	.01	.17
Father Service Class	-.38*	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.59***	.11
Mother Farmer	1.53	1.26
Mother Agricultural Workers	.10	.75
Mother Routine Nonmanuals	-.31*	.15
Mother Service Class	-.53**	.19
Respondent Being a Girl	-.24**	.09
Respondent Has Migration Background	.37	.64
Pseudo R-square	0.08	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Colombia		
Father Working Class	reference category	
Father Out of Labor Force	.49**	.16
Father Farmer	.40	.33
Father Agricultural Workers	.57***	.17
Father Routine Nonmanuals	.42*	.20
Father Service Class	-.16	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.37**	.13
Mother Farmer	.77	1.11
Mother Agricultural Workers	-.05	.61
Mother Routine Nonmanuals	-.14	.20
Mother Service Class	-.50**	.20
Respondent Being a Girl	-.36***	.11
Respondent Has Migration Background	.55	.77
Pseudo R-square	0.03	
Croatia		
Father Working Class	reference category	
Father Out of Labor Force	.46**	.15
Father Farmer	-.01	.53
Father Agricultural Workers	.15	.27
Father Routine Nonmanuals	.07	.19
Father Service Class	.02	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.31*	.13
Mother Farmer	-12.75	791.02
Mother Agricultural Workers	.08	.48
Mother Routine Nonmanuals	-.12	.13
Mother Service Class	-.35*	.16
Respondent Being a Girl	.25**	.10
Respondent Has Migration Background	.05	.14
Pseudo R-square	0.01	
The Czech Republic		
Father Working Class	reference category	
Father Out of Labor Force	.30	.19
Father Farmer	.14	.64
Father Agricultural Workers	.28	.43
Father Routine Nonmanuals	-.48	.42
Father Service Class	-.30	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.71***	.20
Mother Farmer	.99	1.13
Mother Agricultural Workers	-.51	.73
Mother Routine Nonmanuals	-.12	.18
Mother Service Class	-.21	.19
Respondent Being a Girl	.13	.13
Respondent Has Migration Background	.75*	.35
Pseudo R-square	0.02	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Denmark		
Father Working Class	reference category	
Father Out of Labor Force	.20	.20
Father Farmer	-10.86	531.28
Father Agricultural Workers	.59	.34
Father Routine Nonmanuals	-.07	.33
Father Service Class	-.17	.20
Mother Working Class	reference category	
Mother Out of Labor Force	.30	.23
Mother Farmer	-10.57	794.44
Mother Agricultural Workers	-.23	1.04
Mother Routine Nonmanuals	.09	.21
Mother Service Class	.08	.23
Respondent Being a Girl	.06	.15
Respondent Has Migration Background	.61**	.23
Pseudo R-square	0.01	
Finland		
Father Working Class	reference category	
Father Out of Labor Force	.39	.33
Father Farmer	-10.09	523.79
Father Agricultural Workers	-.43	.67
Father Routine Nonmanuals	-.31	.73
Father Service Class	.05	.29
Mother Working Class	reference category	
Mother Out of Labor Force	.76*	.37
Mother Farmer	-10.15	980.78
Mother Agricultural Workers	.14	.83
Mother Routine Nonmanuals	-.11	.35
Mother Service Class	-.04	.34
Respondent Being a Girl	.11	.24
Respondent Has Migration Background	-.28	1.01
Pseudo R-square	0.01	
Germany		
Father Working Class	reference category	
Father Out of Labor Force	1.45***	.13
Father Farmer	-8.97	412.54
Father Agricultural Workers	-.26	.44
Father Routine Nonmanuals	.12	.29
Father Service Class	-.80***	.21
Mother Working Class	reference category	
Mother Out of Labor Force	1.15***	.15
Mother Farmer	omitted	
Mother Agricultural Workers	.40	.64
Mother Routine Nonmanuals	-.61***	.18
Mother Service Class	-.95***	.25
Respondent Being a Girl	-.14	.11
Respondent Has Migration Background	-.27	.16
Pseudo R-square	0.22	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Greece		
Father Working Class	reference category	
Father Out of Labor Force	.79**	.26
Father Farmer	-.61	.59
Father Agricultural Workers	-.02	.45
Father Routine Nonmanuals	.36	.29
Father Service Class	-.06	.18
Mother Working Class	reference category	
Mother Out of Labor Force	-.22	.20
Mother Farmer	-12.65	507.51
Mother Agricultural Workers	.64	.56
Mother Routine Nonmanuals	-.55*	.26
Mother Service Class	-.46*	.22
Respondent Being a Girl	.08	.15
Respondent Has Migration Background	.04	.29
Pseudo R-square	.02	
Hungary		
Father Working Class	reference category	
Father Out of Labor Force	.19	.25
Father Farmer	-11.12	497.98
Father Agricultural Workers	-1.24	1.01
Father Routine Nonmanuals	.25	.47
Father Service Class	-.43	.33
Mother Working Class	reference category	
Mother Out of Labor Force	.84**	.29
Mother Farmer	-10.05	1265.58
Mother Agricultural Workers	.67	.47
Mother Routine Nonmanuals	-.42	.35
Mother Service Class	-.13	.33
Respondent Being a Girl	-.48*	.21
Respondent Has Migration Background	.31	.72
Pseudo R-square	0.04	
Iceland		
Father Working Class	reference category	
Father Out of Labor Force	2.17***	.30
Father Farmer	-11.07	594.01
Father Agricultural Workers	-.99	.80
Father Routine Nonmanuals	.65	.57
Father Service Class	.40	.31
Mother Working Class	reference category	
Mother Out of Labor Force	1.69***	.36
Mother Farmer	-11.15	2626.63
Mother Agricultural Workers	.78	1.13
Mother Routine Nonmanuals	-.51	.42
Mother Service Class	.11	.37
Respondent Being a Girl	-.77***	.22
Respondent Has Migration Background	-.83	.77
Pseudo R-square	0.20	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Ireland		
Father Working Class	reference category	
Father Out of Labor Force	1.33***	.15
Father Farmer	-1.04	1.01
Father Agricultural Workers	-.63*	.30
Father Routine Nonmanuals	-1.36	.72
Father Service Class	-.29	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.80***	.17
Mother Farmer	-9.95	725.95
Mother Agricultural Workers	.84	.76
Mother Routine Nonmanuals	-.21	.19
Mother Service Class	-.62**	.21
Respondent Being a Girl	-.19	.12
Respondent Has Migration Background	.31	.24
Pseudo R-square	0.11	
Italy		
Father Working Class	reference category	
Father Out of Labor Force	1.26***	.12
Father Farmer	.06	.45
Father Agricultural Workers	.16	.17
Father Routine Nonmanuals	-.09	.14
Father Service Class	-.29**	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.55***	.10
Mother Farmer	-14.75	5175.80
Mother Agricultural Workers	.49	.38
Mother Routine Nonmanuals	-.28*	.13
Mother Service Class	-.23	.14
Respondent Being a Girl	-.09	.08
Respondent Has Migration Background	.38*	.16
Pseudo R-square	0.04	
Japan		
Father Working Class	reference category	
Father Out of Labor Force	.29**	.10
Father Farmer	omitted	
Father Agricultural Workers	-.06	.27
Father Routine Nonmanuals	-.19	.10
Father Service Class	-.13	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.08	.14
Mother Farmer	omitted	
Mother Agricultural Workers	-.09	.25
Mother Routine Nonmanuals	-.10	.12
Mother Service Class	-.01	.14
Respondent Being a Girl	.27***	.07
Respondent Has Migration Background	-.07	.63
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)

Missing on the "COMMUNIC Index"	Coef.	Standard Error
Jordan		
Father Working Class	reference category	
Father Out of Labor Force	.40**	.16
Father Farmer	1.68	1.13
Father Agricultural Workers	.33	.32
Father Routine Nonmanuals	-.11	.33
Father Service Class	-.55***	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.19	.46
Mother Farmer	omitted	
Mother Agricultural Workers	-10.38	574.74
Mother Routine Nonmanuals	.04	.74
Mother Service Class	-.25	.50
Respondent Being a Girl	-.47***	.12
Respondent Has Migration Background	-.08	.17
Pseudo R-square	0.03	
Korea		
Father Working Class	reference category	
Father Out of Labor Force	1.96**	.71
Father Farmer	-12.24	936.40
Father Agricultural Workers	-.07	1.84
Father Routine Nonmanuals	1.02	.63
Father Service Class	.54	.56
Mother Working Class	reference category	
Mother Out of Labor Force	.96	.77
Mother Farmer	-10.03	942.93
Mother Agricultural Workers	2.91	1.93
Mother Routine Nonmanuals	.48	.82
Mother Service Class	.98	.77
Respondent Being a Girl	-.94*	.39
Respondent Has Migration Background	-13.41	.
Pseudo R-square	0.05	
Latvia		
Father Working Class	reference category	
Father Out of Labor Force	.37	.24
Father Farmer	.86	.61
Father Agricultural Workers	-.09	.44
Father Routine Nonmanuals	-.13	.73
Father Service Class	-.92**	.37
Mother Working Class	reference category	
Mother Out of Labor Force	.78**	.29
Mother Farmer	-12.02	505.99
Mother Agricultural Workers	-.80	1.03
Mother Routine Nonmanuals	.23	.28
Mother Service Class	-.43	.33
Respondent Being a Girl	-.26	.20
Respondent Has Migration Background	.01	.37
Pseudo R-square	0.04	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Lithuania		
Father Working Class	reference category	
Father Out of Labor Force	.11	.22
Father Farmer	-.27	.60
Father Agricultural Workers	-.14	.43
Father Routine Nonmanuals	.45	.43
Father Service Class	-.49*	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.33	.24
Mother Farmer	-13.20	592.91
Mother Agricultural Workers	1.58***	.46
Mother Routine Nonmanuals	-.07	.26
Mother Service Class	-.28	.22
Respondent Being a Girl	-.02	.16
Respondent Has Migration Background	.69	.40
Pseudo R-square	0.02	
Macao		
Father Working Class	reference category	
Father Out of Labor Force	.54**	.21
Father Farmer	omitted	
Father Agricultural Workers	.20	.62
Father Routine Nonmanuals	-.02	.22
Father Service Class	.25	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.19	.16
Mother Farmer	omitted	
Mother Agricultural Workers	-1.53	1.04
Mother Routine Nonmanuals	-.13	.16
Mother Service Class	-.21	.19
Respondent Being a Girl	.05	.12
Respondent Has Migration Background	-.14	.13
Pseudo R-square	0.01	
The Netherlands		
Father Working Class	reference category	
Father Out of Labor Force	1.10***	.21
Father Farmer	-1.31	1.04
Father Agricultural Workers	-1.16	1.02
Father Routine Nonmanuals	-.34	.31
Father Service Class	-.59**	.21
Mother Working Class	reference category	
Mother Out of Labor Force	.80***	.22
Mother Farmer	-13.19	1825.34
Mother Agricultural Workers	-.18	1.06
Mother Routine Nonmanuals	-.74**	.25
Mother Service Class	-.39	.25
Respondent Being a Girl	-.16	.16
Respondent Has Migration Background	-.02	.21
Pseudo R-square	0.10	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
New Zealand		
Father Working Class	reference category	
Father Out of Labor Force	.94***	.20
Father Farmer	-.65	.60
Father Agricultural Workers	-1.04	.60
Father Routine Nonmanuals	-.15	.43
Father Service Class	-.18	.21
Mother Working Class	reference category	
Mother Out of Labor Force	1.03***	.24
Mother Farmer	-12.45	647.12
Mother Agricultural Workers	.81	.52
Mother Routine Nonmanuals	-.01	.28
Mother Service Class	-.19	.26
Respondent Being a Girl	-.39*	.16
Respondent Has Migration Background	.09	.18
Pseudo R-square	0.08	
Norway		
Father Working Class	reference category	
Father Out of Labor Force	1.32***	.20
Father Farmer	-10.83	449.20
Father Agricultural Workers	-.38	.46
Father Routine Nonmanuals	-.52	.38
Father Service Class	-.57**	.21
Mother Working Class	reference category	
Mother Out of Labor Force	1.36***	.33
Mother Farmer	2.95**	1.20
Mother Agricultural Workers	1.00	.62
Mother Routine Nonmanuals	-.01	.33
Mother Service Class	.21	.32
Respondent Being a Girl	-.05	.15
Respondent Has Migration Background	-.13	.27
Pseudo R-square	0.13	
Poland		
Father Working Class	reference category	
Father Out of Labor Force	1.20***	.27
Father Farmer	-10.47	568.36
Father Agricultural Workers	.42	.35
Father Routine Nonmanuals	.33	.53
Father Service Class	-.33	.36
Mother Working Class	reference category	
Mother Out of Labor Force	.93**	.30
Mother Farmer	-10.11	810.85
Mother Agricultural Workers	.60	.40
Mother Routine Nonmanuals	.05	.32
Mother Service Class	-.46	.40
Respondent Being a Girl	.05	.21
Respondent Has Migration Background	-10.81	514.14
Pseudo R-square	0.06	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Portugal		
Father Working Class	reference category	
Father Out of Labor Force	.87***	.24
Father Farmer	-10.35	494.07
Father Agricultural Workers	-.26	.52
Father Routine Nonmanuals	-.54	.40
Father Service Class	.15	.27
Mother Working Class	reference category	
Mother Out of Labor Force	.36	.22
Mother Farmer	-10.39	1228.38
Mother Agricultural Workers	-.55	1.02
Mother Routine Nonmanuals	-.42	.27
Mother Service Class	-.01	.31
Respondent Being a Girl	-.07	.18
Respondent Has Migration Background	.23	.35
Pseudo R-square	0.03	
Qatar		
Father Working Class	reference category	
Father Out of Labor Force	.86***	.19
Father Farmer	omitted	
Father Agricultural Workers	-13.05	1227.17
Father Routine Nonmanuals	-.18	.34
Father Service Class	.14	.21
Mother Working Class	reference category	
Mother Out of Labor Force	1.09*	.51
Mother Farmer	.	
Mother Agricultural Workers	.	
Mother Routine Nonmanuals	.41	.63
Mother Service Class	.30	.52
Respondent Being a Girl	-.91***	.09
Respondent Has Migration Background	-.74***	.11
Pseudo R-square	0.09	
The Russian Federation		
Father Working Class	reference category	
Father Out of Labor Force	.27	.15
Father Farmer	-12.10	518.18
Father Agricultural Workers	-.31	.33
Father Routine Nonmanuals	-.42	.59
Father Service Class	-.72***	.19
Mother Working Class	reference category	
Mother Out of Labor Force	.37*	.18
Mother Farmer	1.69	1.16
Mother Agricultural Workers	.11	.47
Mother Routine Nonmanuals	-.11	.17
Mother Service Class	-.75***	.17
Respondent Being a Girl	-.0005	.12
Respondent Has Migration Background	.01	.21
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Serbia		
Father Working Class	reference category	
Father Out of Labor Force	.63**	.21
Father Farmer	-.46	1.02
Father Agricultural Workers	.26	.36
Father Routine Nonmanuals	-1.16**	.46
Father Service Class	-.20	.19
Mother Working Class	reference category	
Mother Out of Labor Force	.23	.18
Mother Farmer	-12.75	861.99
Mother Agricultural Workers	-12.70	721.28
Mother Routine Nonmanuals	-.75**	.23
Mother Service Class	-.76***	.23
Respondent Being a Girl	.52***	.15
Respondent Has Migration Background	.01	.25
Pseudo R-square	0.05	
Slovakia		
Father Working Class	reference category	
Father Out of Labor Force	.74***	.23
Father Farmer	2.10***	.64
Father Agricultural Workers	.43	.54
Father Routine Nonmanuals	.36	.47
Father Service Class	-.14	.29
Mother Working Class	reference category	
Mother Out of Labor Force	.89***	.23
Mother Farmer	-13.96	3828.24
Mother Agricultural Workers	.46	.76
Mother Routine Nonmanuals	-.43	.27
Mother Service Class	-.98**	.37
Respondent Being a Girl	-.21	.19
Respondent Has Migration Background	-13.83	749.83
Pseudo R-square	0.07	
Slovenia		
Father Working Class	reference category	
Father Out of Labor Force	.52***	.14
Father Farmer	-.57	.36
Father Agricultural Workers	-.37	.52
Father Routine Nonmanuals	-.15	.25
Father Service Class	-1.07***	.20
Mother Working Class	reference category	
Mother Out of Labor Force	.55***	.14
Mother Farmer	.37	.46
Mother Agricultural Workers	-14.04	779.73
Mother Routine Nonmanuals	-.73***	.17
Mother Service Class	-.94***	.19
Respondent Being a Girl	-.98***	.12
Respondent Has Migration Background	.08	.16
Pseudo R-square	0.10	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Tables for Appendix 1

Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)

Missing on the "COMMUNIC Index"	Coef.	Standard Error
Spain		
Father Working Class	reference category	
Father Out of Labor Force	.73***	.11
Father Farmer	-12.99	897.79
Father Agricultural Workers	.50***	.15
Father Routine Nonmanuals	-.39*	.18
Father Service Class	-.21*	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.37***	.09
Mother Farmer	-12.50	1232.68
Mother Agricultural Workers	-.47	.42
Mother Routine Nonmanuals	-.04	.11
Mother Service Class	-.09	.13
Respondent Being a Girl	-.32***	.07
Respondent Has Migration Background	.83***	.13
Pseudo R-square	0.03	
Sweden		
Father Working Class	reference category	
Father Out of Labor Force	1.57***	.23
Father Farmer	-14.53	1917.13
Father Agricultural Workers	-14.60	1343.46
Father Routine Nonmanuals	.19	.42
Father Service Class	-.04	.24
Mother Working Class	reference category	
Mother Out of Labor Force	1.41***	.25
Mother Farmer	-12.22	2782.92
Mother Agricultural Workers	.61	.78
Mother Routine Nonmanuals	-.31	.27
Mother Service Class	-.44	.27
Respondent Being a Girl	-.22	.18
Respondent Has Migration Background	-.84**	.32
Pseudo R-square	0.14	
Switzerland		
Father Working Class	reference category	
Father Out of Labor Force	1.05***	.21
Father Farmer	omitted	
Father Agricultural Workers	.27	.27
Father Routine Nonmanuals	-.17	.26
Father Service Class	-.27	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.37	.20
Mother Farmer	omitted	
Mother Agricultural Workers	.52	.41
Mother Routine Nonmanuals	-.09	.19
Mother Service Class	-.20	.23
Respondent Being a Girl	-.02	.13
Respondent Has Migration Background	.24	.16
Pseudo R-square	0.02	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Table A5. Sensitivity Tests for the Missing Values on the COMMUNIC (ICT/Internet Communicational Use) Index (continued)		
Missing on the "COMMUNIC Index"	Coef.	Standard Error
Thailand		
Father Working Class	reference category	
Father Out of Labor Force	-.09	.34
Father Farmer	-12.46	1233.20
Father Agricultural Workers	-.52	.34
Father Routine Nonmanuals	-.33	.43
Father Service Class	-.41	.30
Mother Working Class	reference category	
Mother Out of Labor Force	.37	.35
Mother Farmer	-11.48	1469.87
Mother Agricultural Workers	.35	.37
Mother Routine Nonmanuals	.02	.36
Mother Service Class	.19	.36
Respondent Being a Girl	-.07	.20
Respondent Has Migration Background	1.22	1.03
Pseudo R-square	0.01	
Turkey		
Father Working Class	reference category	
Father Out of Labor Force	.28	.16
Father Farmer	.70**	.24
Father Agricultural Workers	.58***	.14
Father Routine Nonmanuals	-.26	.20
Father Service Class	-.25*	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.44	.23
Mother Farmer	omitted	
Mother Agricultural Workers	.26	.54
Mother Routine Nonmanuals	-1.15	.63
Mother Service Class	-.79*	.41
Respondent Being a Girl	.65***	.09
Respondent Has Migration Background	.06	.48
Pseudo R-square	0.04	
Uruguay		
Father Working Class	reference category	
Father Out of Labor Force	.61***	.12
Father Farmer	-.66	.61
Father Agricultural Workers	.49***	.15
Father Routine Nonmanuals	-.22	.16
Father Service Class	-.44***	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.18	.11
Mother Farmer	-.12	1.09
Mother Agricultural Workers	-.54	.54
Mother Routine Nonmanuals	-.09	.12
Mother Service Class	-.81***	.15
Respondent Being a Girl	-.02	.08
Respondent Has Migration Background	.20	.63
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-communicMiss-19-03-2012.smcl".

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Tables for Appendix 1

Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Australia		
Father Working Class	reference category	
Father Out of Labor Force	.87***	.11
Father Farmer	-.11	.32
Father Agricultural Workers	-.11	.25
Father Routine Nonmanuals	-.39	.26
Father Service Class	-.36***	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.72***	.13
Mother Farmer	-.68	1.04
Mother Agricultural Workers	-.11	.52
Mother Routine Nonmanuals	-.28*	.14
Mother Service Class	-.21	.13
Respondent Being a Girl	-.41***	.08
Respondent Has Migration Background	-.48***	.12
Pseudo R-square	0.06	
Austria		
Father Working Class	reference category	
Father Out of Labor Force	.62**	.25
Father Farmer	-12.72	591.33
Father Agricultural Workers	.14	.43
Father Routine Nonmanuals	.02	.44
Father Service Class	-.13	.24
Mother Working Class	reference category	
Mother Out of Labor Force	.29	.24
Mother Farmer	-12.39	972.99
Mother Agricultural Workers	-.14	.50
Mother Routine Nonmanuals	-.75**	.27
Mother Service Class	-.40	.29
Respondent Being a Girl	-.33	.18
Respondent Has Migration Background	.73***	.22
Pseudo R-square	0.04	
Belgium		
Father Working Class	reference category	
Father Out of Labor Force	.86***	.12
Father Farmer	-.57	.78
Father Agricultural Workers	.84***	.25
Father Routine Nonmanuals	-.37	.20
Father Service Class	-.46***	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.31**	.12
Mother Farmer	-.27	1.11
Mother Agricultural Workers	-.33	.55
Mother Routine Nonmanuals	-.52***	.14
Mother Service Class	-.51***	.14
Respondent Being a Girl	-.19*	.09
Respondent Has Migration Background	.60***	.11
Pseudo R-square	0.07	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Bulgaria		
Father Working Class	reference category	
Father Out of Labor Force	.96***	.13
Father Farmer	.68	.50
Father Agricultural Workers	.42	.26
Father Routine Nonmanuals	.22	.28
Father Service Class	-.14	.15
Mother Working Class	reference category	
Mother Out of Labor Force	1.11***	.13
Mother Farmer	1.13*	.57
Mother Agricultural Workers	.37	.30
Mother Routine Nonmanuals	-.41*	.17
Mother Service Class	-.86***	.16
Respondent Being a Girl	-.18	.10
Respondent Has Migration Background	.84	.84
Pseudo R-square	0.13	
Canada		
Father Working Class	reference category	
Father Out of Labor Force	.69***	.06
Father Farmer	-.27*	.12
Father Agricultural Workers	.10	.17
Father Routine Nonmanuals	.05	.13
Father Service Class	-.04	.05
Mother Working Class	reference category	
Mother Out of Labor Force	.46***	.07
Mother Farmer	.45	.25
Mother Agricultural Workers	-.06	.32
Mother Routine Nonmanuals	-.05	.07
Mother Service Class	-.10	.07
Respondent Being a Girl	-.10*	.04
Respondent Has Migration Background	-.32***	.08
Pseudo R-square	0.02	
Chile		
Father Working Class	reference category	
Father Out of Labor Force	1.12***	.11
Father Farmer	.08	.26
Father Agricultural Workers	.64***	.16
Father Routine Nonmanuals	-.16	.16
Father Service Class	-.67***	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.47***	.10
Mother Farmer	1.47	1.26
Mother Agricultural Workers	.36	.63
Mother Routine Nonmanuals	-.25	.14
Mother Service Class	-.33	.17
Respondent Being a Girl	-.09	.09
Respondent Has Migration Background	.59	.57
Pseudo R-square	0.07	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Colombia		
Father Working Class	reference category	
Father Out of Labor Force	.45**	.14
Father Farmer	.02	.34
Father Agricultural Workers	.65***	.15
Father Routine Nonmanuals	.23	.19
Father Service Class	-.24	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.21	.11
Mother Farmer	.60	1.11
Mother Agricultural Workers	.33	.45
Mother Routine Nonmanuals	-.24	.18
Mother Service Class	-.50**	.17
Respondent Being a Girl	-.17	.09
Respondent Has Migration Background	.31	.77
Pseudo R-square	0.03	
Croatia		
Father Working Class	reference category	
Father Out of Labor Force	.44**	.14
Father Farmer	.12	.48
Father Agricultural Workers	.18	.25
Father Routine Nonmanuals	.02	.18
Father Service Class	-.003	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.32**	.13
Mother Farmer	-12.81	756.46
Mother Agricultural Workers	.18	.44
Mother Routine Nonmanuals	-.11	.12
Mother Service Class	-.27	.15
Respondent Being a Girl	.10	.09
Respondent Has Migration Background	.01	.14
Pseudo R-square	0.01	
The Czech Republic		
Father Working Class	reference category	
Father Out of Labor Force	.26	.17
Father Farmer	-.11	.63
Father Agricultural Workers	.39	.36
Father Routine Nonmanuals	-.49	.37
Father Service Class	-.22	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.60***	.17
Mother Farmer	.74	1.12
Mother Agricultural Workers	-.50	.61
Mother Routine Nonmanuals	-.19	.15
Mother Service Class	-.27	.16
Respondent Being a Girl	.06	.11
Respondent Has Migration Background	.84**	.30
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the “ENTERTUSE Index”	Coef.	Standard Error
Denmark		
Father Working Class	reference category	
Father Out of Labor Force	.15	.18
Father Farmer	-11.50	607.58
Father Agricultural Workers	.48	.31
Father Routine Nonmanuals	-.29	.31
Father Service Class	.08	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.53**	.20
Mother Farmer	-11.06	923.32
Mother Agricultural Workers	-.37	1.04
Mother Routine Nonmanuals	.28	.19
Mother Service Class	.08	.21
Respondent Being a Girl	-.22	.13
Respondent Has Migration Background	.49*	.21
Pseudo R-square	0.01	
Finland		
Father Working Class	reference category	
Father Out of Labor Force	.37	.28
Father Farmer	-11.31	778.81
Father Agricultural Workers	-.99	.75
Father Routine Nonmanuals	.01	.53
Father Service Class	-.004	.25
Mother Working Class	reference category	
Mother Out of Labor Force	.69*	.33
Mother Farmer	-11.30	1457.22
Mother Agricultural Workers	-.64	1.06
Mother Routine Nonmanuals	-.01	.29
Mother Service Class	.03	.29
Respondent Being a Girl	-.01	.20
Respondent Has Migration Background	-.61	1.01
Pseudo R-square	0.02	
Germany		
Father Working Class	reference category	
Father Out of Labor Force	1.39***	.12
Father Farmer	-10.29	689.5
Father Agricultural Workers	-.39	.44
Father Routine Nonmanuals	.09	.28
Father Service Class	-.68***	.18
Mother Working Class	reference category	
Mother Out of Labor Force	1.06***	.14
Mother Farmer	omitted	
Mother Agricultural Workers	.25	.64
Mother Routine Nonmanuals	-.62***	.17
Mother Service Class	-.78***	.22
Respondent Being a Girl	-.10	.11
Respondent Has Migration Background	-.33*	.15
Pseudo R-square	0.20	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Greece		
Father Working Class	reference category	
Father Out of Labor Force	.49	.25
Father Farmer	-.33	.47
Father Agricultural Workers	-.01	.41
Father Routine Nonmanuals	.33	.26
Father Service Class	-.06	.16
Mother Working Class	reference category	
Mother Out of Labor Force	-.06	.18
Mother Farmer	-13.34	633.28
Mother Agricultural Workers	.19	.62
Mother Routine Nonmanuals	-.30	.23
Mother Service Class	-.34	.20
Respondent Being a Girl	-.10	.13
Respondent Has Migration Background	.27	.24
Pseudo R-square	0.01	
Hungary		
Father Working Class	reference category	
Father Out of Labor Force	.17	.21
Father Farmer	-11.44	472.36
Father Agricultural Workers	-.53	.60
Father Routine Nonmanuals	.32	.38
Father Service Class	-.76*	.31
Mother Working Class	reference category	
Mother Out of Labor Force	.80***	.24
Mother Farmer	-10.34	1177.23
Mother Agricultural Workers	.64	.39
Mother Routine Nonmanuals	-.41	.28
Mother Service Class	-.13	.28
Respondent Being a Girl	-.47**	.18
Respondent Has Migration Background	-.07	.72
Pseudo R-square	0.04	
Iceland		
Father Working Class	reference category	
Father Out of Labor Force	1.97***	.26
Father Farmer	-16.88	.
Father Agricultural Workers	.11	.45
Father Routine Nonmanuals	-.06	.62
Father Service Class	.13	.27
Mother Working Class	reference category	
Mother Out of Labor Force	1.24***	.31
Mother Farmer	-16.83	.
Mother Agricultural Workers	-.53	1.07
Mother Routine Nonmanuals	-.55	.34
Mother Service Class	-.10	.31
Respondent Being a Girl	-.77***	.20
Respondent Has Migration Background	-.90	.76
Pseudo R-square	0.16	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Ireland		
Father Working Class	reference category	
Father Out of Labor Force	1.22***	.14
Father Farmer	-1.31	1.01
Father Agricultural Workers	-.64*	.27
Father Routine Nonmanuals	-1.20*	.59
Father Service Class	-.29*	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.59***	.16
Mother Farmer	-10.66	848.84
Mother Agricultural Workers	.52	.75
Mother Routine Nonmanuals	-.34*	.17
Mother Service Class	-.54**	.18
Respondent Being a Girl	-.08	.11
Respondent Has Migration Background	.42**	.21
Pseudo R-square	0.09	
Italy		
Father Working Class	reference category	
Father Out of Labor Force	1.21***	.11
Father Farmer	.27	.39
Father Agricultural Workers	.32*	.15
Father Routine Nonmanuals	-.07	.13
Father Service Class	-.17	.09
Mother Working Class	reference category	
Mother Out of Labor Force	.47***	.09
Mother Farmer	-13.17	475.71
Mother Agricultural Workers	.43	.34
Mother Routine Nonmanuals	-.33**	.12
Mother Service Class	-.37**	.13
Respondent Being a Girl	-.15*	.07
Respondent Has Migration Background	.53***	.14
Pseudo R-square	0.04	
Japan		
Father Working Class	reference category	
Father Out of Labor Force	.28**	.10
Father Farmer	omitted	
Father Agricultural Workers	-.08	.27
Father Routine Nonmanuals	-.18	.10
Father Service Class	-.12	.10
Mother Working Class	reference category	
Mother Out of Labor Force	.09	.14
Mother Farmer	omitted	
Mother Agricultural Workers	-.13	.25
Mother Routine Nonmanuals	-.11	.12
Mother Service Class	-.01	.14
Respondent Being a Girl	.25***	.07
Respondent Has Migration Background	-.12	.63
Pseudo R-square	0.01	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Jordan		
Father Working Class	reference category	
Father Out of Labor Force	.29*	.12
Father Farmer	1.04	1.12
Father Agricultural Workers	.06	.27
Father Routine Nonmanuals	.06	.23
Father Service Class	-.29*	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.38	.36
Mother Farmer	omitted	
Mother Agricultural Workers	-10.01	348.72
Mother Routine Nonmanuals	.18	.55
Mother Service Class	.10	.38
Respondent Being a Girl	-.51***	.09
Respondent Has Migration Background	-.05	.12
Pseudo R-square	0.02	
Korea		
Father Working Class	reference category	
Father Out of Labor Force	1.32*	.55
Father Farmer	.06	1.08
Father Agricultural Workers	-2.07	1.44
Father Routine Nonmanuals	.49	.45
Father Service Class	.08	.38
Mother Working Class	reference category	
Mother Out of Labor Force	.61	.56
Mother Farmer	-12.98	3899.17
Mother Agricultural Workers	3.80***	1.17
Mother Routine Nonmanuals	.43	.58
Mother Service Class	.79	.56
Respondent Being a Girl	-.19	.28
Respondent Has Migration Background	-13.56	.
Pseudo R-square	0.03	
Latvia		
Father Working Class	reference category	
Father Out of Labor Force	.29	.20
Father Farmer	.49	.60
Father Agricultural Workers	-.30	.40
Father Routine Nonmanuals	-.03	.60
Father Service Class	-.60*	.28
Mother Working Class	reference category	
Mother Out of Labor Force	.48*	.25
Mother Farmer	-12.65	594.29
Mother Agricultural Workers	-.60	.73
Mother Routine Nonmanuals	-.02	.23
Mother Service Class	-.66**	.27
Respondent Being a Girl	-.15	.17
Respondent Has Migration Background	.05	.30
Pseudo R-square	0.03	

*p<0.05, **p<0.01, ***p<0.001
Source: The 2006 PISA dataset. Own calculations.

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Lithuania		
Father Working Class	reference category	
Father Out of Labor Force	.19	.21
Father Farmer	-.09	.52
Father Agricultural Workers	-.41	.46
Father Routine Nonmanuals	.70	.38
Father Service Class	-.13	.21
Mother Working Class	reference category	
Mother Out of Labor Force	.38	.22
Mother Farmer	-14.05	797.53
Mother Agricultural Workers	.98	.54
Mother Routine Nonmanuals	-.26	.25
Mother Service Class	-.39*	.20
Respondent Being a Girl	-.14	.15
Respondent Has Migration Background	.38	.43
Pseudo R-square	0.02	
Macao		
Father Working Class	reference category	
Father Out of Labor Force	.52**	.20
Father Farmer	omitted	
Father Agricultural Workers	.06	.62
Father Routine Nonmanuals	-.08	.21
Father Service Class	.20	.14
Mother Working Class	reference category	
Mother Out of Labor Force	.27	.15
Mother Farmer	omitted	
Mother Agricultural Workers	-1.61	1.04
Mother Routine Nonmanuals	-.21	.15
Mother Service Class	-.14	.18
Respondent Being a Girl	.09	.11
Respondent Has Migration Background	-.15	.12
Pseudo R-square	0.01	
The Netherlands		
Father Working Class	reference category	
Father Out of Labor Force	.90***	.19
Father Farmer	-1.91	1.04
Father Agricultural Workers	-.80	.72
Father Routine Nonmanuals	-.001	.22
Father Service Class	-.16	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.63***	.19
Mother Farmer	-10.58	404.99
Mother Agricultural Workers	.67	.64
Mother Routine Nonmanuals	-.33	.18
Mother Service Class	-.21	.19
Respondent Being a Girl	-.06	.12
Respondent Has Migration Background	.003	.18
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
New Zealand		
Father Working Class	reference category	
Father Out of Labor Force	.89***	.18
Father Farmer	-.26	.47
Father Agricultural Workers	-.84	.52
Father Routine Nonmanuals	-.33	.43
Father Service Class	-.33	.20
Mother Working Class	reference category	
Mother Out of Labor Force	1.03***	.24
Mother Farmer	-13.18	785.27
Mother Agricultural Workers	.41	.56
Mother Routine Nonmanuals	.01	.27
Mother Service Class	.01	.24
Respondent Being a Girl	-.53***	.15
Respondent Has Migration Background	.01	.18
Pseudo R-square	0.07	
Norway		
Father Working Class	reference category	
Father Out of Labor Force	1.31***	.18
Father Farmer	-12.18	818.07
Father Agricultural Workers	-.14	.39
Father Routine Nonmanuals	-.19	.31
Father Service Class	-.42*	.18
Mother Working Class	reference category	
Mother Out of Labor Force	.93***	.26
Mother Farmer	2.30*	1.18
Mother Agricultural Workers	.04	.65
Mother Routine Nonmanuals	-.38	.26
Mother Service Class	-.17	.26
Respondent Being a Girl	-.11	.14
Respondent Has Migration Background	-.19	.26
Pseudo R-square	0.11	
Poland		
Father Working Class	reference category	
Father Out of Labor Force	.94***	.24
Father Farmer	-12.19	1094.60
Father Agricultural Workers	.58*	.28
Father Routine Nonmanuals	-.42	.59
Father Service Class	-.18	.26
Mother Working Class	reference category	
Mother Out of Labor Force	.71**	.25
Mother Farmer	-11.87	1475.82
Mother Agricultural Workers	.32	.33
Mother Routine Nonmanuals	-.02	.26
Mother Service Class	-.30	.30
Respondent Being a Girl	.19	.17
Respondent Has Migration Background	-12.60	1048.83
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Portugal		
Father Working Class	reference category	
Father Out of Labor Force	.85***	.22
Father Farmer	-10.71	546.18
Father Agricultural Workers	-.18	.47
Father Routine Nonmanuals	-.23	.33
Father Service Class	.16	.25
Mother Working Class	reference category	
Mother Out of Labor Force	.31	.20
Mother Farmer	-10.79	1358.79
Mother Agricultural Workers	-.76	1.01
Mother Routine Nonmanuals	-.47	.25
Mother Service Class	-.08	.29
Respondent Being a Girl	-.05	.16
Respondent Has Migration Background	.37	.31
Pseudo R-square	0.02	
Qatar		
Father Working Class	reference category	
Father Out of Labor Force	.76***	.16
Father Farmer	omitted	
Father Agricultural Workers	-12.45	768.23
Father Routine Nonmanuals	-.08	.28
Father Service Class	.08	.18
Mother Working Class	reference category	
Mother Out of Labor Force	.76*	.39
Mother Farmer	omitted	
Mother Agricultural Workers	omitted	
Mother Routine Nonmanuals	.25	.49
Mother Service Class	.22	.40
Respondent Being a Girl	-.79***	.08
Respondent Has Migration Background	-.62***	.09
Pseudo R-square	0.07	
The Russian Federation		
Father Working Class	reference category	
Father Out of Labor Force	.19	.13
Father Farmer	-13.13	757.11
Father Agricultural Workers	-.17	.27
Father Routine Nonmanuals	-.19	.46
Father Service Class	-.47**	.15
Mother Working Class	reference category	
Mother Out of Labor Force	.22	.17
Mother Farmer	1.34	1.16
Mother Agricultural Workers	.15	.41
Mother Routine Nonmanuals	-.13	.15
Mother Service Class	-.64***	.14
Respondent Being a Girl	-.03	.10
Respondent Has Migration Background	-.10	.19
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Serbia		
Father Working Class	reference category	
Father Out of Labor Force	.47*	.19
Father Farmer	-.73	1.02
Father Agricultural Workers	.12	.34
Father Routine Nonmanuals	-.99**	.36
Father Service Class	-.38*	.17
Mother Working Class	reference category	
Mother Out of Labor Force	.12	.16
Mother Farmer	-13.17	960.42
Mother Agricultural Workers	-13.18	803.30
Mother Routine Nonmanuals	-.72***	.20
Mother Service Class	-.85***	.21
Respondent Being a Girl	.32**	.13
Respondent Has Migration Background	.03	.22
Pseudo R-square	0.04	
Slovakia		
Father Working Class	reference category	
Father Out of Labor Force	.51**	.19
Father Farmer	1.59**	.63
Father Agricultural Workers	.01	.53
Father Routine Nonmanuals	.01	.43
Father Service Class	-.82**	.28
Mother Working Class	reference category	
Mother Out of Labor Force	.98***	.21
Mother Farmer	-13.75	2999.14
Mother Agricultural Workers	.29	.75
Mother Routine Nonmanuals	-.29	.23
Mother Service Class	-.22	.27
Respondent Being a Girl	-.18	.16
Respondent Has Migration Background	-13.58	631.60
Pseudo R-square	0.06	
Slovenia		
Father Working Class	reference category	
Father Out of Labor Force	.43**	.14
Father Farmer	-.57	.33
Father Agricultural Workers	-.58	.52
Father Routine Nonmanuals	-.08	.22
Father Service Class	-.85***	.16
Mother Working Class	reference category	
Mother Out of Labor Force	.56***	.13
Mother Farmer	.56	.40
Mother Agricultural Workers	-.74	1.03
Mother Routine Nonmanuals	-.55***	.15
Mother Service Class	-.69***	.16
Respondent Being a Girl	-.93***	.11
Respondent Has Migration Background	.06	.15
Pseudo R-square	0.08	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Spain		
Father Working Class	reference category	
Father Out of Labor Force	.58***	.10
Father Farmer	-13.77	1111.57
Father Agricultural Workers	.33*	.14
Father Routine Nonmanuals	-.12	.13
Father Service Class	-.14	.08
Mother Working Class	reference category	
Mother Out of Labor Force	.21**	.08
Mother Farmer	-13.42	1540.35
Mother Agricultural Workers	-.24	.31
Mother Routine Nonmanuals	-.19*	.09
Mother Service Class	-.19	.10
Respondent Being a Girl	-.30***	.06
Respondent Has Migration Background	.82***	.11
Pseudo R-square	0.02	
Sweden		
Father Working Class	reference category	
Father Out of Labor Force	1.53***	.21
Father Farmer	.78	.77
Father Agricultural Workers	-13.50	477.75
Father Routine Nonmanuals	.49	.33
Father Service Class	-.16	.22
Mother Working Class	reference category	
Mother Out of Labor Force	1.42***	.24
Mother Farmer	-14.17	1894.84
Mother Agricultural Workers	.39	.77
Mother Routine Nonmanuals	-.12	.24
Mother Service Class	-.16	.24
Respondent Being a Girl	-.27	.16
Respondent Has Migration Background	-.52	.27
Pseudo R-square	0.13	
Switzerland		
Father Working Class	reference category	
Father Out of Labor Force	.80***	.18
Father Farmer	omitted	
Father Agricultural Workers	.12	.23
Father Routine Nonmanuals	-.31	.21
Father Service Class	-.29*	.13
Mother Working Class	reference category	
Mother Out of Labor Force	.43**	.16
Mother Farmer	omitted	
Mother Agricultural Workers	.42	.36
Mother Routine Nonmanuals	-.07	.15
Mother Service Class	.10	.18
Respondent Being a Girl	-.12	.11
Respondent Has Migration Background	.32**	.12
Pseudo R-square	0.02	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A6. Sensitivity Tests for the Missing Values on the ENTERTUSE (ICT/Internet Entertainment Use) Index (continued)		
Missing on the "ENTERTUSE Index"	Coef.	Standard Error
Thailand		
Father Working Class	reference category	
Father Out of Labor Force	-.16	.31
Father Farmer	-13.86	2184.43
Father Agricultural Workers	-.24	.30
Father Routine Nonmanuals	-.32	.38
Father Service Class	-.45	.27
Mother Working Class	reference category	
Mother Out of Labor Force	.45	.31
Mother Farmer	-12.78	2600.21
Mother Agricultural Workers	.13	.34
Mother Routine Nonmanuals	.10	.32
Mother Service Class	.22	.32
Respondent Being a Girl	-.06	.18
Respondent Has Migration Background	-13.98	2236.50
Pseudo R-square	0.01	
Turkey		
Father Working Class	reference category	
Father Out of Labor Force	.28	.15
Father Farmer	.55*	.23
Father Agricultural Workers	.52***	.14
Father Routine Nonmanuals	-.18	.18
Father Service Class	-.20	.11
Mother Working Class	reference category	
Mother Out of Labor Force	.52*	.23
Mother Farmer	omitted	
Mother Agricultural Workers	-.02	.58
Mother Routine Nonmanuals	-.95	.55
Mother Service Class	-.57	.37
Respondent Being a Girl	.54***	.09
Respondent Has Migration Background	-.07	.47
Pseudo R-square	0.03	
Uruguay		
Father Working Class	reference category	
Father Out of Labor Force	.60***	.11
Father Farmer	-.82	.61
Father Agricultural Workers	.43**	.14
Father Routine Nonmanuals	-.28	.15
Father Service Class	-.34**	.12
Mother Working Class	reference category	
Mother Out of Labor Force	.17	.10
Mother Farmer	-.27	1.08
Mother Agricultural Workers	-.71	.53
Mother Routine Nonmanuals	-.19	.11
Mother Service Class	-.88***	.14
Respondent Being a Girl	-.05	.08
Respondent Has Migration Background	-.45	.75
Pseudo R-square	0.04	
*p<0.05, **p<0.01, ***p<0.001 Source: The 2006 PISA dataset. Own calculations.		

Data taken from "C:\Documents and Settings\Utente\Desktop\EUI\Revision-I\Work\LogFiles\rev1-log-entert2Miss-19-03-2012.smcl".

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Table A7. Ordinal regression coefficients for the difference in the probability of having the Internet at home between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class. A comparison of two models – Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into 'not having the Internet access at home' category.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Colombia	1.03***	0.10	4,202	1.03***	0.10	4,478
Jordan	1.25***	0.08	6,121	1.27***	0.08	6,509
Qatar	1.01	0.13	5770	0.93***	0.11	6,265
* p<0.05, ** p<0.01, *** p<0.001		Total N =	16,093		Total N =	17,252

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.
Source: The PISA 2006 dataset. Own calculations.

Table A8. Ordinal regression coefficients for the difference in the probability of having the Internet at home between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class. A comparison of two models – Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into 'not having the Internet access at home' category.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Colombia	1.17***	0.13	4,202	1.20***	0.13	4,478
Jordan	0.69***	0.21	6,121	0.70***	0.21	6,509
Qatar	0.98***	0.23	5770	1.02***	0.21	6,265
* p<0.05, ** p<0.01, *** p<0.001		Total N =	16,093		Total N =	17,252

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.
Source: The PISA 2006 dataset. Own calculations.

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Table A9. Ordinal regression coefficients for the difference in skills between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class. A comparison of two models - Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of having 'No confidence' in one's digital skills.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Australia	0.24***	0.04	13,447	0.28***	0.04	14,170
Belgium	0.11*	0.06	8,170	0.16**	0.05	8,857
Bulgaria	0.36***	0.08	3,935	0.35***	0.07	4,498
Canada	0.09**	0.03	20,500	0.09**	0.03	22,646
Chile	0.59***	0.09	4,512	0.62***	0.08	5,233
Colombia	0.58***	0.09	3,908	0.51***	0.08	4,478
Croatia	0.22**	0.08	4,639	0.22***	0.07	5,213
The Czech Republic	0.38***	0.07	5,532	0.37***	0.06	5,932
Denmark	0.34***	0.08	4,185	0.31***	0.08	4,532
Germany	0.17*	0.08	4,373	0.25***	0.07	4,891
Greece	0.08	0.07	4,533	0.11	0.06	4,873
Ireland	0.14*	0.07	3,932	0.21***	0.06	4,585
Italy	0.16***	0.03	20,644	0.18***	0.03	21,773
Japan	0.29***	0.08	4,955	0.29***	0.07	5,952
Jordan	0.53***	0.07	5,803	0.56	0.06	6,509
Lithuania	0.42***	0.08	4,315	0.36***	0.07	4,744
Macao	0.36***	0.08	4,303	0.22**	0.08	4,760
The Netherlands	0.03	0.08	4,505	0.13	0.07	4,871
New Zealand	0.15	0.07	4,566	0.22**	0.07	4,823
Norway	-0.06	0.08	4,367	0.03	0.07	4,692
Qatar	0.47***	0.11	4,755	0.41***	0.09	6,265
The Russian Federation	0.52***	0.07	5,398	0.56***	0.06	5,799
Serbia	0.47***	0.08	4,357	0.44***	0.07	4,798
Slovakia	0.35***	0.07	4,399	0.38***	0.07	4,731
Slovenia	0.19**	0.06	6,130	0.29***	0.06	6,595
Spain	0.13***	0.04	18,368	0.15***	0.03	19,604
Sweden	0.04	0.07	4,177	0.06	0.07	4,443
Turkey	0.24***	0.07	4,307	0.30***	0.07	4,942
Uruguay	0.55***	0.09	3,992	0.56***	0.08	4,839
		Total N =	191,007		Total N =	210,048

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Table A10. Ordinal regression coefficients for the difference in skills between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class. A comparison of two models - Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of having 'No confidence' in one's digital skills.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Australia	0.21***	0.06	13,447	0.21***	0.05	14,170
Belgium	0.14*	0.07	8,170	0.23***	0.06	8,857
Bulgaria	0.61***	0.09	3,935	0.66***	0.08	4,498
Canada	0.16***	0.04	20,500	0.15***	0.04	22,646
Chile	0.56***	0.10	4,512	0.57***	0.09	5,233
Colombia	0.52***	0.10	3,908	0.48***	0.09	4,478
Croatia	0.40***	0.09	4,639	0.42***	0.08	5,213
The Czech Republic	0.57***	0.08	5,532	0.53***	0.08	5,932
Denmark	0.16	0.10	4,185	0.10	0.09	4,532
Germany	0.04	0.10	4,373	0.08	0.08	4,891
Greece	0.29***	0.09	4,533	0.31***	0.08	4,873
Ireland	0.21*	0.09	3,932	0.27***	0.08	4,585
Italy	0.16***	0.04	20,644	0.15***	0.04	21,773
Japan	0.22*	0.11	4,955	0.15	0.10	5,952
Jordan	0.32	0.19	5,803	0.32	0.17	6,509
Lithuania	0.43***	0.08	4,315	0.41***	0.07	4,744
Macao	0.25**	0.10	4,303	0.25**	0.09	4,760
The Netherlands	0.15	0.10	4,505	0.20*	0.09	4,871
New Zealand	0.22*	0.09	4,566	0.20*	0.09	4,823
Norway	0.19	0.12	4,367	0.16	0.11	4,692
Qatar	0.76***	0.20	4,755	0.52**	0.17	6,265
The Russian Federation	0.54***	0.07	5,398	0.53***	0.07	5,799
Serbia	0.52***	0.09	4,357	0.64***	0.08	4,798
Slovakia	0.78***	0.09	4,399	0.77***	0.08	4,731
Slovenia	0.09	0.07	6,130	0.22**	0.07	6,595
Spain	0.04	0.05	18,368	0.05	0.04	19,604
Sweden	0.21**	0.09	4,177	0.23**	0.08	4,443
Turkey	0.52**	0.18	4,307	0.52***	0.16	4,942
Uruguay	0.70***	0.10	3,992	0.76***	0.08	4,839
		Total N =	191,007		Total N =	210,048

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Table A11. Ordinal regression coefficients for the difference in educational use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class. A comparison of two models – Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for educational purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Belgium	0.12**	0.05	8,314	0.16***	0.05	8,857
Bulgaria	0.07	0.07	3,954	0.10	0.06	4,498
Canada	0.10***	0.03	20,553	0.11***	0.03	22,646
Chile	0.08	0.07	4,644	0.15*	0.08	5,233
Colombia	0.26***	0.07	3,927	0.26***	0.07	4,478
Croatia	0.06	0.07	4,684	0.04	0.06	5,213
The Czech Republic	0.18**	0.06	5,565	0.18***	0.06	5,932
Denmark	0.05	0.07	4,263	0.10	0.07	4,532
Germany	0.03	0.06	4,443	0.08	0.06	4,891
Greece	-0.24***	0.06	4,582	-0.20***	0.06	4,873
Ireland	-0.005	0.07	4,181	0.03	0.07	4,585
Japan	0.04	0.08	4,966	0.07	0.08	5,952
Jordan	0.25***	0.06	5,867	0.29***	0.06	6,509
Macao	0.42***	0.07	4,394	0.32***	0.07	4,760
The Netherlands	0.13*	0.07	4,554	0.22***	0.06	4,871
Norway	0.17**	0.06	4,423	0.21***	0.06	4,692
Qatar	0.06	0.09	5,406	0.05	0.09	6,265
The Russian Federation	0.32***	0.06	5,437	0.36***	0.06	5,799
Serbia	0.26***	0.06	4,527	0.29***	0.06	4,798
Slovenia	0.07	0.06	6,146	0.14**	0.06	6,595
Spain	-0.01	0.03	18,512	0.01	0.03	19,604
Turkey	-0.01	0.07	4,373	0.08	0.06	4,942
Uruguay	0.33***	0.07	4,084	0.40***	0.07	4,839
		Total N =	141,799		Total N =	153,364

* p<0.05, ** p<0.01, *** p<0.001
Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.
Source: The PISA 2006 dataset. Own calculations.

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Table A12. Ordinal regression coefficients for the difference in educational use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class. A comparison of two models - Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for educational purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Belgium	0.04	0.06	8,314	0.10	0.06	8,857
Bulgaria	0.06	0.07	3,954	0.22***	0.07	4,498
Canada	0.10**	0.04	20,553	0.11**	0.04	22,646
Chile	0.06	0.08	4,644	0.11	0.08	5,233
Colombia	0.34***	0.09	3,927	0.39***	0.08	4,478
Croatia	0.12	0.08	4,684	0.18*	0.08	5,213
The Czech Republic	0.15*	0.07	5,565	0.19**	0.08	5,932
Denmark	0.07	0.08	4,263	0.01	0.08	4,532
Germany	-0.10	0.08	4,443	-0.03	0.08	4,891
Greece	0.05	0.08	4,582	0.13	0.08	4,873
Ireland	0.02	0.09	4,181	0.08	0.08	4,585
Japan	0.15	0.12	4,966	0.13	0.11	5,952
Jordan	-0.0001	0.17	5,867	0.12	0.16	6,509
Macao	0.19*	0.09	4,394	0.20*	0.09	4,760
The Netherlands	0.08	0.08	4,554	0.10	0.08	4,871
Norway	0.03	0.10	4,423	0.02	0.10	4,692
Qatar	0.35*	0.18	5,406	0.31	0.17	6,265
The Russian Federation	0.46***	0.07	5,437	0.50***	0.06	5,799
Serbia	0.17*	0.08	4,527	0.26***	0.08	4,798
Slovenia	-0.16**	0.06	6,146	-0.03	0.06	6,595
Spain	-0.04	0.04	18,512	-0.01	0.04	19,604
Turkey	0.05	0.15	4,373	0.13	0.15	4,942
Uruguay	0.25**	0.08	4,084	0.37***	0.08	4,839
		Total N =	141,799		Total N =	153,364

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Table A13. Ordinal regression coefficients for communicational use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class. A comparison of two models – Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for communicational purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Bulgaria	0.44***	0.08	4,056	0.42***	0.08	4,498
Canada	0.16***	0.03	20,881	0.15***	0.03	22,646
Chile	0.83***	0.08	4,732	0.79***	0.07	5,233
Colombia	0.57***	0.07	4,114	0.54***	0.07	4,478
Croatia	0.24***	0.07	4,766	0.21***	0.06	5,213
Ireland	0.60***	0.07	4,295	0.59***	0.06	4,585
Japan	0.35***	0.07	5,017	0.35***	0.07	5,952
Macao	0.38***	0.07	4,465	0.29***	0.07	4,760
Qatar	0.47***	0.09	5,677	0.38***	0.09	6,265
Slovenia	0.42***	0.06	6,249	0.24**	0.10	6,595
Turkey	0.28***	0.07	4,458	0.30***	0.06	4,942
Uruguay	0.69***	0.08	4,245	0.68***	0.07	4,839
		Total N =	72,955		Total N =	80,006

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Table A14. Ordinal regression coefficients for communicational use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class. A comparison of two models – Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for communicational purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Bulgaria	0.60***	0.08	4,056	0.67***	0.08	4,498
Canada	0.14***	0.04	20,881	0.13***	0.04	22,646
Chile	0.69***	0.09	4,732	0.69***	0.09	5,233
Colombia	0.75***	0.09	4,114	0.75***	0.08	4,478
Croatia	0.33***	0.08	4,766	0.36***	0.08	5,213
Ireland	0.41***	0.08	4,295	0.44***	0.08	4,585
Japan	0.27**	0.11	5,017	0.24*	0.10	5,952
Macao	0.26**	0.09	4,465	0.27**	0.09	4,760
Qatar	0.61***	0.17	5,677	0.53**	0.17	6,265
Slovenia	0.42***	0.07	6,249	0.49***	0.06	6,595
Turkey	0.43**	0.16	4,458	0.49**	0.15	4,942
Uruguay	0.54***	0.08	4,245	0.64***	0.08	4,839
		Total N =	72,955		Total N =	80,006

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Table A15. Ordinal regression coefficients for entertainment use between the respondents whose fathers belong to service class and the respondents whose fathers belong to working class. A comparison of two models - Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for entertainment purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Belgium	-0.12**	0.05	8,362	-0.06	0.05	8,857
Bulgaria	0.18**	0.07	4,016	0.16*	0.07	4,498
Canada	-0.06*	0.03	20,752	-0.04	0.03	22,646
Chile	0.48***	0.07	4,657	0.53***	0.07	5,233
Colombia	0.41***	0.07	4,018	0.39***	0.07	4,478
Croatia	0.28***	0.07	4,721	0.24***	0.06	5,213
The Czech Republic	0.31***	0.06	5,609	0.31***	0.05	5,932
Denmark	-0.04	0.07	4,292	-0.04	0.06	4,532
Germany	-0.01	0.06	4,474	0.05	0.06	4,891
Ireland	0.08	0.06	4,232	0.11	0.06	4,585
Japan	0.18*	0.08	4,986	0.18*	0.07	5,952
Jordan	0.50***	0.06	6,007	0.50***	0.06	6,509
Macao	0.17*	0.07	4,426	0.11	0.07	4,760
The Netherlands	-0.09	0.06	4,608	-0.06	0.06	4,871
Qatar	0.23**	0.09	5,525	0.14	0.09	6,265
The Russian Federation	0.46***	0.06	5,435	0.47***	0.06	5,799
Serbia	0.26***	0.06	4,553	0.28***	0.06	4,798
Slovenia	0.19***	0.06	6,177	0.27***	0.05	6,595
Spain	0.16***	0.03	18,604	0.16***	0.03	19,604
Turkey	0.29***	0.07	4,391	0.29***	0.06	4,942
Uruguay	0.24***	0.07	4,152	0.29***	0.07	4,839
		Total N =	133,997		Total N =	145,799

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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Tables for Appendix 1

Table A16. Ordinal regression coefficients for entertainment use between the respondents whose mothers belong to service class and the respondents whose mothers belong to working class. A comparison of two models - Model 1 in which the dependent variable has missing values, and Model 2 where in the dependent variable the missing values are recoded into a category of 'Never' using ICT/Internet for entertainment purposes.

	Model 1			Model 2		
Country	Service-working class difference	Standard error	N	Service-working class difference	Standard error	N
Belgium	-0.17**	0.06	8,362	-0.08	0.06	8,857
Bulgaria	0.37***	0.07	4,016	0.47***	0.07	4,498
Canada	-0.07*	0.04	20,752	-0.04	0.03	22,646
Chile	0.40***	0.08	4,657	0.39***	0.08	5,233
Colombia	0.40***	0.09	4,018	0.45***	0.08	4,478
Croatia	0.30***	0.08	4,721	0.32***	0.08	5,213
The Czech Republic	0.20**	0.07	5,609	0.23***	0.07	5,932
Denmark	-0.07	0.08	4,292	-0.07	0.08	4,532
Germany	-0.16*	0.08	4,474	-0.06	0.08	4,891
Ireland	0.02	0.08	4,232	0.09	0.08	4,585
Japan	0.27*	0.11	4,986	0.24*	0.11	5,952
Jordan	0.15	0.17	6,007	0.11	0.16	6,509
Macao	0.30***	0.09	4,426	0.29***	0.09	4,760
The Netherlands	-0.10	0.08	4,608	-0.06	0.08	4,871
Qatar	0.28	0.18	5,525	0.20	0.17	6,265
The Russian Federation	0.37***	0.07	5,435	0.43***	0.06	5,799
Serbia	0.26***	0.08	4,553	0.35***	0.08	4,798
Slovenia	0.04***	0.06	6,177	0.13*	0.06	6,595
Spain	0.06	0.04	18,604	0.08*	0.04	19,604
Turkey	0.52***	0.16	4,391	0.54***	0.15	4,942
Uruguay	0.39***	0.08	4,152	0.52***	0.08	4,839
		Total N =	133,997		Total N =	145,799

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

Note: Positive values indicate the advantage of service class children in comparison with working class children. Only countries where missing values on the dependent variable are above five percent of all the values of the dependent variable are reported in the table.

Source: The PISA 2006 dataset. Own calculations.

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APPENDIX 2

Construction of the index of household's wealth

The original first item st13q02 from the PISA 2006 dataset indicating whether the respondent has a room of one's own in the household is reversed, so that a value of one on the dummy variable indicates the possession of one's own room by the respondent.

```
codebook st13q02

--------------------------------------------------------------------------
st13q02                                         possessions own room q13b
--------------------------------------------------------------------------

                  type:  numeric (byte)
                 label:  LABG

                 range:  [1,2]                        units:  1
         unique values:  2                          missing:  6930/398750

           tabulation:  Freq.   Numeric  Label
                       3.1e+05        1  yes
                        83383         2  no
                         6930         .

tab1 st13q02

-> tabulation of st13q02

possessions |
   own room |
       q13b |      Freq.     Percent        Cum.
------------+-----------------------------------
        yes |    308,437       78.72       78.72
         no |     83,383       21.28      100.00
------------+-----------------------------------
      Total |    391,820      100.00

recode st13q02 (1=2 "yes") (2=1 "no") (.=.), gen(st13q02rev)
(391820 differences between st13q02 and st13q02rev)

codebook st13q02rev

--------------------------------------------------------------------------
st13q02rev                  RECODE of st13q02 (possessions own room q13b)
--------------------------------------------------------------------------

                  type:  numeric (byte)
                 label:  st13q02rev

                 range:  [1,2]                          units:  1
         unique values:  2                          missing .:  6930/398750

           tabulation:  Freq.   Numeric  Label
                        83383         1  no
                       3.1e+05        2  yes
                         6930         .
```


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```
tab1 st13q02rev

-> tabulation of st13q02rev

  RECODE of |
    st13q02 |
(possession |
 s own room |
      q13b) |      Freq.     Percent        Cum.
------------+-----------------------------------
         no |     83,383       21.28       21.28
        yes |    308,437       78.72      100.00
------------+-----------------------------------
      Total |    391,820      100.00
```

```
codebook st14q01

--------------------------------------------------------------------------
st14q01                                        how many cell phones q14a
--------------------------------------------------------------------------

                  type:  numeric (byte)
                 label:  LABH

                 range:  [1,4]                        units:  1
         unique values:  4                        missing .:  5871/398750

            tabulation:  Freq.   Numeric  Label
                         23687         1  none
                         40417         2  one
                         57940         3  two
                        2.7e+05        4  three or more
                          5871         .
```

```
tab st14q01

how many cell |
  phones q14a |      Freq.     Percent        Cum.
--------------+-----------------------------------
         none |     23,687        6.03        6.03
          one |     40,417       10.29       16.32
          two |     57,940       14.75       31.06
three or more |    270,835       68.94      100.00
--------------+-----------------------------------
        Total |    392,879      100.00
```


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```
codebook st14q02

-------------------------------------------------------------------------
st14q02                                        how many televisions q14b
-------------------------------------------------------------------------

                  type:  numeric (byte)
                 label:  LABH

                 range:  [1,4]                        units:  1
         unique values:  4                        missing .:  5490/398750

           tabulation:  Freq.   Numeric  Label
                         5686         1  none
                        88246         2  one
                       1.4e+05        3  two
                       1.6e+05        4  three or more
                         5490         .


tab st14q02

     how many |
  televisions |
         q14b |      Freq.     Percent        Cum.
--------------+-----------------------------------
         none |      5,686        1.45        1.45
          one |     88,246       22.44       23.89
          two |    135,564       34.47       58.36
three or more |    163,764       41.64      100.00
--------------+-----------------------------------
        Total |    393,260      100.00


codebook st14q04

-------------------------------------------------------------------------
st14q04                                               how many cars q14d
-------------------------------------------------------------------------

                  type:  numeric (byte)
                 label:  LABH

                 range:  [1,4]                        units:  1
         unique values:  4                        missing .:  9823/398750

           tabulation:  Freq.   Numeric  Label
                        82700         1  none
                       1.4e+05        2  one
                       1.1e+05        3  two
                        53178         4  three or more
                         9823         .
```


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```
tab st14q04

how many cars |
         q14d |      Freq.     Percent        Cum.
--------------+-----------------------------------
         none |     82,700       21.26       21.26
          one |    138,773       35.68       56.94
          two |    114,276       29.38       86.33
three or more |     53,178       13.67      100.00
--------------+-----------------------------------
        Total |    388,927      100.00


factor st13q02rev st14q01 st14q02 st14q04, factors(1)
(obs=383792)

Factor analysis/correlation                    Number of obs    =   383792
    Method: principal factors                  Retained factors =        1
    Rotation: (unrotated)                      Number of params =        4

    --------------------------------------------------------------------------
       Factor  |   Eigenvalue   Difference        Proportion   Cumulative
    -------------+------------------------------------------------------------
        Factor1  |    1.16465      1.20744            1.4662       1.4662
        Factor2  |   -0.04279      0.10441           -0.0539       1.4124
        Factor3  |   -0.14720      0.03313           -0.1853       1.2270
        Factor4  |   -0.18034            .           -0.2270       1.0000
    --------------------------------------------------------------------------
LR test: independent vs. saturated: chi2(6)  = 2.0e+05 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

    ---------------------------------------
        Variable |  Factor1 |   Uniqueness
    -------------+----------+---------------
      st13q02rev |   0.3421 |      0.8830
         st14q01 |   0.5575 |      0.6892
         st14q02 |   0.6061 |      0.6326
         st14q04 |   0.6077 |      0.6306
    ---------------------------------------

predict wealthmyindex4
(regression scoring assumed)

Scoring coefficients (method = regression)

    ------------------------
        Variable |  Factor1
    -------------+----------
      st13q02rev |  0.14550
         st14q01 |  0.27922
         st14q02 |  0.32525
         st14q04 |  0.32715
    ------------------------
```


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```
codebook wealthmyindex4

-------------------------------------------------------------------------------
wealthmyindex4                                               Scores for factor 1
-------------------------------------------------------------------------------

                  type:  numeric (float)

                 range:  [-2.3856304,1.1247756]       units:  1.000e-09
         unique values:  128                       missing .:  14958/398750

                  mean:   2.0e-10
             std. dev:   .775514

           percentiles:        10%        25%        50%        75%        90%
                         -1.09333     -.3703     .07338    .472867    .784894
```


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```
tab1 wealthmyindex4

-> tabulation of wealthmyindex4
```

Scores for factor 1	Freq.	Percent	Cum.
-2.38563	1,070	0.28	0.28
-2.073604	244	0.06	0.34
-2.045748	62	0.02	0.36
-2.029412	1,318	0.34	0.70
-1.986143	5,286	1.38	2.08
-1.761578	87	0.02	2.10
-1.733722	101	0.03	2.13
-1.717385	274	0.07	2.20
-1.705866	12	0.00	2.20
-1.68953	95	0.02	2.23
-1.674117	5,432	1.42	3.64
-1.646261	940	0.24	3.89
-1.629924	5,225	1.36	5.25
-1.586656	1,074	0.28	5.53
-1.449551	82	0.02	5.55
-1.421696	40	0.01	5.56
-1.405359	122	0.03	5.59
-1.39384	21	0.01	5.60
-1.377503	140	0.04	5.63
-1.365984	9	0.00	5.64
-1.36209	3,580	0.93	6.57
-1.349648	36	0.01	6.58
-1.334235	1,879	0.49	7.07
-1.317898	5,998	1.56	8.63
-1.306379	94	0.02	8.66
-1.290042	1,156	0.30	8.96
-1.274629	1,834	0.48	9.44
-1.246774	511	0.13	9.57
-1.230437	1,285	0.33	9.90
-1.187168	186	0.05	9.95
-1.109669	100	0.03	9.98
-1.093333	196	0.05	10.03
-1.081814	19	0.00	10.03
-1.065477	148	0.04	10.07
-1.053958	9	0.00	10.07
-1.050064	3,718	0.97	11.04
-1.037621	46	0.01	11.06
-1.022208	1,945	0.51	11.56
-1.009766	33	0.01	11.57
-1.005872	4,707	1.23	12.80
-.9943527	260	0.07	12.86
-.9780158	3,293	0.86	13.72
-.966497	41	0.01	13.73
-.962603	2,188	0.57	14.30
-.9501601	206	0.05	14.36
-.9347473	1,383	0.36	14.72
-.9184105	2,876	0.75	15.47
-.9068916	112	0.03	15.50
-.8905548	989	0.26	15.75
-.8751419	348	0.09	15.84
-.8472862	171	0.04	15.89
-.8309494	308	0.08	15.97
-.7697874	49	0.01	15.98
-.7534506	296	0.08	16.06

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-.7419317	5	0.00	16.06
-.7255949	64	0.02	16.08
-.7101821	3,853	1.00	17.08
-.6977392	11	0.00	17.08
-.6938452	5,067	1.32	18.40
-.6823264	357	0.09	18.50
-.6659895	5,073	1.32	19.82
-.6544707	67	0.02	19.84
-.6505767	4,545	1.18	21.02
-.6381338	759	0.20	21.22
-.622721	2,184	0.57	21.79
-.6102781	71	0.02	21.81
-.6063842	4,363	1.14	22.94
-.5948653	361	0.09	23.04
-.5785285	3,406	0.89	23.92
-.5670096	29	0.01	23.93
-.5631157	548	0.14	24.07
-.5506727	384	0.10	24.17
-.5352599	544	0.14	24.32
-.518923	860	0.22	24.54
-.5074042	89	0.02	24.56
-.4910673	693	0.18	24.74
-.4299054	32	0.01	24.75
-.4135686	273	0.07	24.82
-.3857129	15	0.00	24.83
-.3703001	1,519	0.40	25.22
-.3539632	12,084	3.15	28.37
-.3424443	54	0.01	28.39
-.3261075	1,448	0.38	28.76
-.3106947	8,157	2.13	30.89
-.2982518	181	0.05	30.94
-.2943578	9,017	2.35	33.29
-.282839	618	0.16	33.45
-.2665021	7,819	2.04	35.48
-.2549832	87	0.02	35.51
-.2510893	1,900	0.50	36.00
-.2386464	1,543	0.40	36.40
-.2232336	897	0.23	36.64
-.2107907	109	0.03	36.67
-.2068968	1,668	0.43	37.10
-.1953779	264	0.07	37.17
-.179041	2,265	0.59	37.76
-.1675222	37	0.01	37.77
-.1511853	577	0.15	37.92
-.0736865	102	0.03	37.95
-.030418	396	0.10	38.05
-.0140812	7,231	1.88	39.93
.0137745	289	0.08	40.01
.0291873	4,540	1.18	41.19
.0455242	32,076	8.36	49.55
.0570431	165	0.04	49.59
.0733799	3,472	0.90	50.50
.0887927	5,909	1.54	52.04
.1012356	468	0.12	52.16
.1051296	5,387	1.40	53.56
.1166484	519	0.14	53.70
.1329853	5,399	1.41	55.10
.1445041	105	0.03	55.13
.160841	2,174	0.57	55.70
.1886967	292	0.08	55.77
.3258009	1,833	0.48	56.25

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.3690694	1,449	0.38	56.63
.3854062	26,272	6.85	63.47
.413262	956	0.25	63.72
.4286748	5,673	1.48	65.20
.4450116	33,219	8.66	73.86
.4565305	204	0.05	73.91
.4728673	4,844	1.26	75.17
.500723	1,046	0.27	75.44
.7252883	8,562	2.23	77.68
.7685568	3,222	0.84	78.52
.7848936	49,553	12.91	91.43
.8127493	2,390	0.62	92.05
1.124776	30,514	7.95	100.00
Total	383,792	100.00	

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```
recode wealthmyindex4 (min/-.3700=1 "First quarter") (-.3699/.0734=2
"Second quarter") (.0733/.4729=3 "Third quarter") (.4730/max=4 "Fourth
quarter") (.=.), gen(wealthindex4cats)
(383792 differences between wealthmyindex4 and wealthindex4cats)

codebook wealthindex4cats

-------------------------------------------------------------------------
wealthindex4cats           RECODE of wealthmyindex4 (Scores for factor 1)
-------------------------------------------------------------------------

                  type:  numeric (float)
                 label:  wealthindex4cats

                 range:  [1,4]                        units:  1
         unique values:  4                        missing .:  14958/398750

            tabulation:  Freq.   Numeric  Label
                         96806         1  First quarter
                         96996         2  Second quarter
                         94703         3  Third quarter
                         95287         4  Fourth quarter
                         14958         .


tab1 wealthindex4cats

-> tabulation of wealthindex4cats

     RECODE of |
wealthmyindex4 |
   (Scores for |
     factor 1) |      Freq.     Percent        Cum.
---------------+-----------------------------------
 First quarter |     96,806       25.22       25.22
Second quarter |     96,996       25.27       50.50
 Third quarter |     94,703       24.68       75.17
Fourth quarter |     95,287       24.83      100.00
---------------+-----------------------------------
         Total |    383,792      100.00
```


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APPENDIX 3

A Note on Multiple Correspondence Analysis (MCA)

The content of this appendix relies on the work of Hjellbrekke et al. (2007, 269-272) and Le Roux and Rouanet (2010).

The basic dataset for Multiple Correspondence Analysis (MCA) is an Individuals x Questions table, where questions are variables with a finite number of categories (or modalities). MCA applies directly when for each question, each individual chooses one and only one category. Denoting *I* the set of n individuals and *Q* the set of questions, the basic data table is thus an *I* x *Q* table, with in cell (*i*, *q*) the category of question *q* chosen by individual *i*. MCA represents the set of individuals by a cloud of points, for which principal directions are sought.

The distance between two individuals is determined by their responses to the questions to which they give different answers. If for question *q*, individual *i* chooses category *k* and individual *i'* a category *k'* different from *k*; then letting n_k and $n_{k'}$ be the numbers of individuals who have chosen *k* and *k'*, respectively, the part of distance between *i* and *i'* due to question *q* is defined by $d_q^2(i,i') = \frac{1}{f_k} + \frac{1}{f_{k'}}$ (where $f_k = \frac{n_k}{n}$ and $f_{k'} = \frac{n_{k'}}{n}$). The overall distance *d*(*i*, *i'*) between *i* and *i'* is then defined by $d^2(i,i') = \frac{1}{Q}\sum_{q \in Q} d_q^2(i,i')$.

The distances between individuals determine the cloud of individuals, consisting of *n* points in a space with (at most) *K* – *Q* (overall number of categories – number of questions) dimensions.

The cloud of categories follows: if $n_{kk'}$ denotes the number of individuals who have chosen both *k* and *k'*, the distance *d*(*k*, *k'*) is defined by $d^2(k,k') = \frac{n_k + n_{k'} - 2n_{kk'}}{n_k n_{k'}/n}$ (number of individuals who have chosen *k* or *k'* but not both, divided by theoretical frequency).

Both clouds have the same number of dimensions and the same overall variance.

If one fits a cloud by orthogonal projection onto a line, such that the variance of the projected cloud is maximal, this line is called the first principal axis of the cloud, and the variance of the projected cloud is called the variance of the first axis, or first eigenvalue, denoted *λ*. The best fit by a two-dimensional cloud (plane), by a three-dimensional cloud, etc., define the sequence of principal axes, with decreasing eigenvalues $\lambda_1 > \lambda_2$... The principal

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axes of the cloud of individuals and of the cloud of categories are in a one-one correspondence.

The main aid to interpretation are contributions. The proportion of variance of axis due to a point is called the contribution of point to the variance of axis. If y^k denotes the abscissa of category *k* of weight *fk* on the axis of variance *λ*, the contribution of *k* is

$$\mathrm{Ctr}_k = (f_k/Q)(y^k)^2/\lambda$$

Contributions add up by grouping: this allows the calculation of contributions of questions, and contributions of headings. For a standard MCA, the contribution of question q to the cloud is $\mathrm{Ctr}_k = (Kq - 1)/(K - Q)$, where *Kq* denotes the number of categories of question *q*.

Active individuals are individuals on whom the construction of the clouds is based. Active questions are the questions that create distances between individuals. Supplementary individuals are individuals who do not participate in the construction of axes. Supplementary categories (sometimes called 'illustrative categories') are categories that are not used to define the distance between individuals (Le Roux and Rouanet, 2010: 42).

Infrequent categories of active variables can be overly influential for the determination of axes. For this reason, as a rule of thumb, categories of frequencies less than 5 percent need to be pooled with others whenever feasible. Alternatively, infrequent categories of active variables as well as other types of undesirable categories one would like to discard (e.g., missing data or 'others' chosen as a response item in a questionnaire) may be treated as the so-called passive categories of active variables. A variant of MCA, called specific MCA, ignores passive categories for the determination of distances between individuals. Specific MCA amounts to studying the orthogonal projection of the overall cloud of individuals on the subspace associated with active categories. If, for question *q*, both individuals *i* and *i'* have chosen active categories, the distance is unchanged. If, for disagreement question *q*, individual *i* has chosen an active category *k* and individual *i'* a passive category *k'*, the part of the squared distance due to *q* is the specific distance between two individuals defined as $d_q'^2(i,i') = \frac{1}{f_k}$, instead of the regular distance defined as $d_q^2(i,i') = \frac{1}{f_k} + \frac{1}{f_{k'}}$. (Le Roux and Rouanet, 2010: 61-63)

For a given category *k*, the subset of individuals having chosen *k* determines a subcloud, whose mean point is called the modality mean-point denoted $\bar{k}$. For each axis, the

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coordinate of $\bar{k}$ is equal to $\sqrt{\lambda}y^k$, where y^k is the coordinate of category k. This fundamental property of regular MCA relates the two clouds of individuals and of categories and is preserved in specific MCA.

Putting a variable as a structuring factor allows not only the associated mean points to be studied, but also the subclouds induced by the variable. Geometric summaries of subclouds in a plane are provided by concentration ellipses. The length of each half-axis of concentration ellipse is twice the standard deviation of the subcloud along this direction; for a normally-shaped cloud, the concentration ellipse contains about 86.47% of the points of the cloud.

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REFERENCES

When citations in the text mention two years, as in 'Huizinga (1938/1955),' the first is the original date of publication and the second the date of the reprint for page reference.

ABS (2008) 'Household Use of Information Technology, Australia, 2005-2006'. Available online at http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyReleaseDate/EC6E4AB45631E20ECA2573B600186F04?OpenDocument on 02.09.2010.

Acker, Joan (1973) 'Women and Social Stratification: A Case of Intellectual Sexism', *American Journal of Sociology* 78, pp. 936-945.

Acock, Alan C. and Yang, Wen Shan (1984) 'Parental power and adolescents parental identification', *Journal of Marriage and Family* 46, pp. 487-495.

Adams, Julia (2002) 'Deconstruction and Decomposition? A Comment on Grusky and Weeden', *Acta Sociologica*, 45:3, 225 – 227.

Alesina, Alberto and Zeira, Joseph (2006) *Technology and Labor Regulations*. NBER Working Paper No. 12581.

Allison, Paul D. (1978) 'Measures of Inequality', in: *American Sociological Review*, Vol. 43, No. 6, pp. 865-880.

Anderson Neil, Lankshear Colin, Timms Carolyn, and Courtney Lyn (2008) ''Because it's boring, irrelevant and I don't like computers': Why high school girls avoid professionally-oriented ICT subjects', *Computers & Education* 50, pp. 1304–1318.

Autor, David H., Katz, Lawrence F. and Kearney, Melissa S. (2006) *The Polarization of the U.S. Labor Market*. NBER Working Paper No. 11986.

Autor, David H., Katz, Lawrence F. and Kearney, Melissa S. (2005a) *Rising Wage Inequality: The Role of Composition and Prices.* NBER Working Paper No. 11628.

Autor, David H., Katz, Lawrence F. and Kearney, Melissa S. (2005b) *Trends in U.S. Wage Inequality: Re-Assessing the revisionists*. NBER Working Paper No. 11627.

Avineri, Shlomo (1968) *The Social and Political Thought of Karl Marx*. Cambridge: Cambridge University Press.

Basl, Josef (2007) 'Computer literacy in the context of social exclusion and digital divide: Czech Republic in an international perspective', a paper delivered at the ISA RC28 Spring Meeting „Social Inequality and Mobility in the Process of Social Transformation". Brno, 24.5. – 27.5.2007. Available online at http://www.soc.cas.cz/download/439/Basl_RC28_paper.pdf on 02.09.2010.

Beck, Ulrich (1992) *Risk Society. Towards a New Modernity*. London: Sage Publications.

Beck, Ulrich and Beck-Gernsheim, Elisabeth (2002) *Individualization. Institutionalized Individualism and its Social and Political Consequences*. London: Sage Publications.

Bell, Daniel (1960) *The End of Ideology: On the Exhaustion of Political Ideas in the Fifties*. Glencoe: The Free Press.

Benkler, Yochai (2006) *The Wealth of Networks. How Social Production Transforms Markets and Freedom.* New Heaven and London: Yale University Press.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Benzécri, Jean-Paul (1992) *Correspondence Analysis Handbook*. New York: Dekker.

Berle, Adolf A. and Means Gardiner (1932) *The Modern Corporation and Private Property*. New York: Macmillan.

Berlin, Isaiah (2002) *Karl Marx: His Life and Environment*. New York: Oxford University Press.

Bernstein, Basil (1971) *Class, Codes, and Control: Vol. 1, Theoretical Studies toward a Sociology of Education*. London: Routledge and Kegan Paul.

Bernstein, Eduard (1899) *Die Voraussetzungen des Sozialismus und die Aufgaben der Sozialdemokratie*. Stuttgart.

Birkelund, Gunn Elisabeth (2002) 'A Class Analysis for the Future? Comment on Grusky and Weeden: 'Decomposition Without Death: A Research Agenda for a New Class Analysis", *Acta Sociologica*, 45:3, 217 – 221.

Blasius, Jörg (1994) 'Correspondence Analysis in Social Science Research', in: Greenacre, Michael and Blasius, Jörg (eds.) *Correspondence Analysis in the Social Sciences: Recent Developments and Applications*. San Diego: Academic Press, pp. 23-52.

Blossfeld, Hans-Peter and Timm, Andreas (2003) *Who marries whom? Educational Systems As Marriage Markets in Modern Societies*. Dordrecht and Bosteon: Kluwers Academic Publishers.

Bologna, Sergio (2006) *Die Zerstorung der Mittelschichten. Thesen zur Neuen Selbstandigkeit*. [The Destruction of Middle Classes. Theses on the New Self-Reliance] Wien: Nauser&Nauser.

Bonfadelli, Heinz (2002) 'The Internet and Knowledge Gaps. A Theoretical and Empirical Investigation', *European Journal of Communication* Vol. 17(1): 65–84.

Bourdieu, Pierre (1984) *Distinction: A Social Critique of the Judgment of Taste*. Cambridge, MA: Harvard University Press.

Bourdieu, Pierre (1986) 'The Forms of Capital', in: Richardson, John G. (ed) *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood Press, pp. 241-258.

Bourdieu, Pierre (1987) 'What Makes a Social Class? On the Theoretical and Practical Existence of Groups', *Berkeley Journal of Sociology* 32, pp. 1-17.

Bourdieu, Pierre (1988) *Homo Academicus*. Cambridge: Polity Press.

Bourdieu, Pierre (1990) 'Social space and symbolic power', in: Bourdieu, Pierre *In Other Words: Essays Towards a Reflexive Sociology*. Stanford, CA: Stanford University Press, pp. 122-139.

Bourdieu, Pierre (1991) 'Social Space and Genesis of "Classes"', in: Bourdieu, Pierre *Language and Symbolic Power*. Cambridge, MA: Harvard University Press, pp. 229-251.

Bourdieu, Pierre (1996) *The State Nobility. Elite Schools in the Field of Power*. Cambridge: Polity Press.

Bourdieu, Pierre (1998) 'Social Space and Symbolic Space', in: Bourdieu, Pierre *Practical Reason: On the Theory of Action*. Stanford, CA: Stanford University Press, pp. 1-18.

Bourdieu, Pierre (2008) 'A Conservative Revolution in Publishing', in: *Translation Studies*, Vol. 1, No. 2, pp. 123-153.

Bourdieu, Pierre and Passeron, Jean-Claude (1990) *Reproduction in Education, Society and Culture*. London: Sage Publications.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Bourdieu, Pierre and Wacquant, Loïc J.D. (1992) *An Invitation to Reflexive Sociology*. Chicago: The University of Chicago Press.
Bourdieu, Pierre Accardo Alain, Balazs Gabrielle, Beaud Stèphane, Bonvin François, Bourdieu Emmanuel, Bourgois Philippe, Broccolichi Sylvain, Champagne Patrick, Christin Rosine, Faguer Jean-Pierre, Garcia Sandrine, Lenoir Remi, Œvrard François, Pialoux Michel, Pinto Loius, Podalydès Denis, Sayad Abdelmalek, Souliè Charles, and Wacquant , Loïc J. D. (1999) *The Weight of the World: Social Suffering in Contemporary Society*. Stanford, CA: Stanford University Press.

Bowles, Samuel and Gintis, Herbert (1976) *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life*. New York: Basic Books.

Boyd, Carol J. (1989) 'Mothers and daughters: A discussion of theory and research', *Journal of Marriage and the Family* 51, pp. 291-301.

Braverman, Harry (1974) *Labor and Monopoly Capital*. New York: Monthly Review Press.

Breen, Richard (1997) 'Risk, Recommodification and the Future of the Service Class', *Sociology* 31:3, pp. 473-489.

Breen, Richard and Goldthorpe, John H. (2001) 'Class, Mobility and Merit: The Experience of Two British Birth Cohorts', *European Sociological Review* 17:2, pp. 81-101.

Burawoy, Michael and Wright Erik Olin (2001) 'Sociological Marxism', in: Turner, Jonathan (ed.) *Handbook of Sociological Theory*. New York: Kluwer Academic/Plenum Publishers.

Burnham, James (1941) *The Managerial Revolution: What Is Happening in the World*. New York: Day.

Busch, Tori (1995) 'Gender differences in self-efficacy and attitudes towards computers', *Journal of Educational Computing Research*, Volume 12 Issue 2, pp. 147–158.

Cairncross, Frances (1997) *The Death of Distance: How the Communications Revolution Will Change Our Lives*. Boston: Harvard Business School Press.

Castells, Manuel (2000) 'Materials for an exploratory theory of the network society', *British Journal of Sociology*, Vol. 51, no. 1/2000, pp. 5 – 24.

Castells, Manuel (2001a) *The Rise of the Network Society*. Second edition. Oxford: Blackwell.

Castells, Manuel (2001b) *The Power of Identity*. Second edition. Oxford: Blackwell.

Castells, Manuel (2001c) *End of Millennium*. Second edition. Oxford: Blackwell.

Castells, Manuel (2001d) *The Internet Galaxy. Reflections on the Internet, Business, and Society.* Oxford: Oxford University Press.

Castells, Manuel (2004) 'Informationalism, networks, and the network society: a theoretical blueprint', in: Castells, Manuel (ed.) *The Network Society: A Cross-Cultural Perspective.* Cheltenham, Uk and Northampton, MA, USA: Edward Elgar, pp. 3-45.

Castells, Manuel (2009) *Communication Power*. Oxford: Oxford University Press.

Ceci, Steven J., and Williams, Wendy M. (2010) *The Mathematics of Sex: How Biology and Society Conspire to Limit Talented Women and Girls*. New York and Oxford: Oxford University Press.

Cheong, Weng H. (2008) *Surveying Macao ICT Indicators 2008*. Available online at http://live.online.se/wip/publishedarchive/Macao_ICT_Indicators_2008.pdf on 02.09.2010.

Clark, Terry Nichols and Lipset, Seymour Martin (1991) 'Are Social Classes Dying?', in: *International Sociology*, Vol. 6, No. 4, pp. 397-410.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Clausen, Sten-Erik (1998) *Applied Correspondence Analysis: An Introduction* (QASS Series). Thousand Oaks, CA: Sage.

Compaine, Benjamin M. (ed.) (2001) *The Digital Divide: Facing A Crisis or Creating A Myth?* Cambridge: The MIT Press.

Dahrendorf, Ralf (1959) *Class and Class Conflict in Industrial Society*. Stanford, CA: Stanford University Press.

de Haan, Jos (2004) 'A Multifaceted Dynamic Model of the Digital Divide', *IT&SOCIETY*, VOL. 1, ISSUE 7 (SPRING/SUMMER), pp. 66-88. Available online at http://www.stanford.edu/group/siqss/itandsociety/v01i07/v01i07a05.pdf on 11.09.2008.

DiMaggio, Paul, Hargittai, Eszter, Neuman, W. Russell, and Robinson, John P. (2001) 'Social Implications of the Internet', *Annual Review of Sociology*, Vol. 27: pp. 307 – 336.

DiMaggio, Paul, Hargittai, Eszter, Celeste, Coral, and Shafer, Steven (2004) 'Digital Inequality: From Unequal Access to Differentiated Use', in: Neckerman, Kathryn (ed.) *Social Inequality*. New York: Russell Sage Foundation, pp. 355-400.

DiMaggio, Paul and Bonikowski Bart (2008) 'Make Money Surfing the Web? The Impact of Internet Use on the Earnings of U.S. Workers', *American Sociological Review*, Vol. 73 (April), pp. 227-250.

DiPrete, Thomas A., Goux, Dominique, Maurin, Eric and Quesnel-Vallee, Amelie (2006) 'Work and pay in flexible and regulated labor markets: A generalized perspective on institutional evolution and inequality trends in Europe and the U.S.', *Research in Social Stratification and Mobility* 24, pp. 311-332.

Dronkers, Jaap (2008) 'Education as the backbone of inequality - European education policy: constrains and possibilities', in: Becker Frans, Duffek Karl and Mörschel Tobias (eds.) *Social Democracy and Education. The European Experience*. Berlin /Wien/ Amsterdam: Friederich Ebert Stiftung/Karl Renner Institut/Wiardi Beckman Stichting. Pp. 50-135.

Dutton William H., Shepherd Adrian, and di Gennaro, Corinna (2007) 'Digital divides and choices reconfiguring access. National and cross-national patterns of Internet diffusion and use', in: Anderson Ben, Brynin Malcolm, Gershung Jonathan and Raban Yoel (eds.) *Information and Communication Technologies in Society. E-living in a digital Europe*. London and New York: Routledge.

Dyson, Esther (1997) *Release 2.0: A Design for Living in the Digital Age.* New York: Broadway Books.

Erikson, Robert (1984) 'Social class of men, women, and families', *Sociology* 18, pp. 500-514.

Erikson, Robert and Goldthorpe, John H. (1992) *The Constant Flux. A Study of Class Mobility in Industrial Societies*. Oxford: Clarendon Press.

Esping-Andersen, Gøsta (2009) *The Incomplete Revolution: Adapting Welfare States to Women's New Roles*. Cambridge, UK and Malden, MA: Polity.

European Commission (2009) *She Figures 2009. Statistics and Indicators on Gender Equality in Science*. Luxembourg: Publications Office of the European Union. Available at http://ec.europa.eu/research/science-society/document_library/pdf_06/she_figures_2009_en.pdf on 11.09.2009.

Eurostat (2011) *Level of Internet access – households*. A dataset available online at http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsiir040 on 20. 04. 2012.

Eurostat (2006) *Safer Internet.* A report available online at http://ec.europa.eu/information_society/activities/sip/docs/eurobarometer/eurobarometer_2005_25_ms.pdf on 11.09.2008.

Facer, Keri and Furlong, John (2001) 'Beyond the myth of the "cyberkid": Young people at the margins of the information society', *Journal of Youth Studies* 4 (4): 451-469.

Featherman, David L. and Hauser Robert M. (1978) *Opportunity and Change.* New York: Academic.

Feenstra, Robert C. and Hanson, Gordon H. (2001) *Global Production Sharing And Rising Inequality: A Survey Of Trade And Wages.* NBER Working Paper No. 8372.

Ferrera, Maurizio (1996) 'The Southern Model of Welfare State in Social Europe', in: *Journal of European Social Policy*, Vol. 6, No. 1, pp. 17-37.

Fischer, Claude S. (1992) *America Calling: A Social History of the Telephone to 1940*. Berkeley, Ca: University of California Press.

Florida, Richard (2002) *The Rise of the Creative Class. And How It's Transforming Work, Leisure and Everyday Life.* New York: Basic Books.

Florida, Richard (2005) *The Flight of the Creative Class. The New Global Competition for Talent.* New York: HarperCollins.

Flynn, James R. (2009) *What Is Intelligence? Beyond the Flynn Effect*. Cambridge: Cambridge University Press.

Fong, Eric, Wellman, Barry, Kew, Melissa, and Wilkes, Rima (2001) *Correlates of the Digital Divide: Individual, Household and Spatial Variation*. A report available at http://chass.utoronto.ca/~wellman/publications/digitaldivide/digital-report2d.PDF on 02.09.2010.

Gabaix, Xavier and Landier, Augustin (2006) *Why Has CEO Pay Increased So Much?*, NBER Working Paper No. 12365.

Ganzeboom, Harry B. G. and Treiman, Donald J. (1996) 'Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations', *Social Science Research* 25, pp. 201-239.

Garib, Geetha, Martin Garcia, Teresa and Dronkers, Jaap (2007) 'Are the effects of different family forms on children's educational performance related to the demographic characteristics and family policies of modern societies?', in: Moerbeek, Hester, Niehof, Anke and van Ophem, Johan (eds.) *Changing families and their lifestyles*, Wageningen: Wageningen Academic Publishers, pp. 27-50. Available online at http://www.eui.eu/Personal/Dronkers/articles/changingfamilies.pdf on 11.09.2008.

Gee, James Paul (2003) *What Video Games Have to Teach Us About Learning and Literacy*. New York: Palgrave MacMillan.

Gentile, Douglas A. (2011) 'The Multiple Dimensions of Video Game Effects', *Child Development Perspectives*, Volume 5, Number 2, pp. 75-81.

Gentile, Douglas A. And Gentile, J. Ronald (2008) 'Violent Video Games as Exemplary Teachers: A Conceptual Analysis', *Journal of Youth and Adolescence*, Volume 37, Number 2, pp. 127-141.

Giddens, Anthony (1973) *The Class Structure of the Advanced Societies*. New York: Harper and Row.

Gifi, Albert (1981) *Nonlinear Multivariate Analysis*. Leiden: Department of Datatheory, University of Leiden.

Goldin, Claudia (2006) 'The Quiet Revolution That Transformed Women's Employment, Education, and Family', *American Economic Review. Papers and Proceedings* 96 (May). Available online at http://www.economics.harvard.edu/faculty/goldin/files/GoldinEly.pdf on 01.06.2010.

Goldin, Caludia and Katz, Lawrence F. (2007) *Long-run Changes in the U.S. Wage Structure: Narrowing, Widening, Polarizing.* NBER Working Paper No. 13568.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Goldthorpe, John H. (1980) *Social Mobility and Class Structure in Modern Britain*. Oxford: Clarendon Press.

Goldthorpe, John H. (1983) 'Women and class analysis: In defense of the conventional view', *Sociology* 17, pp. 465-488.

Goldthorpe, John H. (1984) 'Women and class analysis: A reply to the replies', *Sociology* 18, pp. 491-499.

Goldthorpe, John H. (2000) *On Sociology: Numbers, Narratives and the Integration of Research and Theory*. Oxford: Oxford University Press.

Goldthorpe, John H. (2002) 'Occupational Sociology, Yes: Class Analysis, No – A Comment on Grusky and Weedens' Research Agenda', *Acta Sociologica* 45, pp. 211-217.

Goldthorpe, John H. and Marshall, Gordon (1992) 'The Promising Future of Class Analysis: A Response to Recent Critiques', *Sociology* 26:3, pp. 381-400.

Goodman, Roger and Peng, Ito (1996) 'The East Asian Welafre States: Peripatetic Learning, Adaptive Change, and Nation-Building', in: Esping-Andersen, Gøsta (ed.) *Welfare States in Transition. National Adaptations in Global Economies*. London: Sage, pp. 192-224.

Gordo, Blanca (2003) 'Overcoming Digital Deprivation', *IT&Society*, Vol. 1, Issue 5, (Summer), pp. 166–180. Available online at http://www.stanford.edu/group/siqss/itandsociety/v01i05/v01i05a08.pdf on 11.09.2008.

Gordon, Robert J. and Dew-Becker, Ian (2008) *Controversies About the Rise of American Inequality: A Survey*. NBER Working Paper No. 13982.

Grabka, Markus M. and Frick, Joachim R. (2008) *Schrmpfende Mittelsicht – Anzeichen einer dauerhaften Polarisierung der verfügbaren Einkommen?* Berlin: DIW No.10. Available online at http://www.diw.de/documents/publikationen/73/79586/08-10-1.pdf on 11.09.2008.

Green, C. Shawn and Bavelier, Daphne (2003) 'Action Video Game Modifies Visual Selective Attention', *Nature*, Volume 423, Issue of 29 May, pp. 534-537.

Greenacre, Michael (1984) *Theory and Applications of Correspondence Analysis*. London: Academic Press.

Greenacre, Michael (1994) 'Correspondence Analysis and Its Interpretation', in: Greenacre, Michael and Blasius Jörg (eds.) *Correspondence Analysis in the Social Sciences: Recent Developments and Applications*. San Diego: Academic Press, pp. 3-22.

Greenacre, Michael (2006) 'From Simple to Multiple Correspondence Analysis', in: Greenacre, Michael and Blasius Jörg (eds.) *Multiple Correspondence Analysis and Related Methods*. Boca Raton: Chapman & Hall/CRC, 41-76.

Greenacre, Michael (2007) *Correspondence Analysis in Practice*. Second edition. Boca Raton: Chapman & Hall/CRC.

Greenfield, Patricia M. (2009) 'Technology and Informal Education: What Is Taught, What Is Learned', *Science*, Volume 323, Issue 5910, pp. 69-71.

Grusky, David B. and Galescu Gabriela (2005) 'Foundations of a neo-Durkheimian class analysis', in: Wright, Erik Olin (ed.) *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 51-81.

Grusky, David B. and Sørensen, Jesper B. (1998) 'Can Class Analysis Be Salvaged?', *American Journal of Sociology* Volume 103, Number 5 (March), pp. 1187–1234.

Grusky, David B. and Sørensen, Jesper B. (2001) 'Are There Big Social Classes?', in: Grusky, David B. (ed.) *Social Stratification: Class, Race, and Gender in Sociological Perspective*, pp. 183-194. Boulder: Westview Press.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Grusky, David B. and Weeden, Kim A. (2001) ‘Decomposition without Death: A Research Agenda for a New Class Analysis’, *Acta Sociologica* 44, pp. 203-218.

Grusky, David B. and Weeden, Kim A. (2002) 'Class Analysis and the Heavy Weight of Convention', *Acta Sociologica*, 45: 3, 229–236.

Grusky, David B. and Weeden, Kim A. (2008) ‘Are there social classes? A framework for testing sociology’s favorite concept’, in: Lareau, Annette and Conley, Dalton (eds.) *Social class: How Does It Work?* New York: Russell Sage Foundation, pp. 65-89.

Grusky, David B., Weeden Kim A. and Sørensen, Jesper B. (2000) ‘The Case for Realism in Class Analysis’, *Political Power and Social Theory* 14, pp. 291-305.

Guiso, Luigi, Monte, Ferdinando, Sapienza, Paola and Zingales, Luigi (2008) ‘Culture, Gender, and Math’, *Science* Volume 320, pp. 1164-1665.

Guttman, Louis (1941) ‘The Quantification of a Class of Attributes’, in: Horst, Paul (ed.) *The Prediction of Personal Adjustment.* New York: Social Science Research Council, pp. 319-348.

Hakkarainen, Kai, Ilomäki Liisa, Lipponen Lasse, Muukkonen Hanni, Rahikainen Marjaana, Tuominen Taneli, Lakkala Minna and Lehtinen Erno (2000) ‘Students' skills and practices of using ICT: results of a national assessment in Finland’, *Computers & Education* 34, pp. 103-117.

Hargittai, Eszter (2003) ‘Serving Citizens’ Needs: Minimazing Online Hurdles to Accessing Government Information’, *IT&Society*, Vol. 1, Issue 3 (Winter), pp. 27–41. Available online at http://www.stanford.edu/group/siqss/itandsociety/v01i03/v01i03a03.pdf on 11.09.2008.

Hargittai, Eszter (2005) ‘Survey Measures of Web-Oriented Digital Literacy’, in: *Social Science Computer Review*, Vol. 23, Issue 3, pp. 371-379. Available online at http://www.eszter.com/research/a15-surveymeasures.html on 06.02.2011.

Hargittai, Eszter (2007) ‘A framework for studying differences in people’s digital media uses’, in: Otto, Hans-Uwe, Kutscher, Nadia, Klein, Alexandra and Iske, Stefan (eds.) *Grenzlose Cyberwelt? Zum Verhältnis von digitaler Ungleichheit und neuen Bidungszugängen für Jugendliche*. [Borderless Cyberworld? On the Relationship between Digital Inequality and the New Avenues for Education for Young People] Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 121-136.

Hausmann Ricardo, Tyson Laura D., and Zahidi, Saadia (2006) *The Global Gender Gap Report 2006*. Geneva: World Economic Forum. A report available online at http://www.weforum.org/pdf/gendergap/report2006.pdf on 01.06.2010.

Hausmann Ricardo, Tyson Laura D., and Zahidi, Saadia (2007) *The Global Gender Gap Report 2007*. Geneva: World Economic Forum. A report available online at http://www.weforum.org/pdf/gendergap/report2007.pdf on 01.06.2010.

Heston, Alan, Summers Robert, and Aten, Bettina (August 2009) Penn World Table Version 6.3, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania. Available online at **http://pwt.econ.upenn.edu/php_site/pwt_index.php** on 01.06.2010.

Hjellbrekke, Johs., Le Roux, Brigitte, Korsnes, Olav, Lebaron, Frédéric, Rosenlund, Lennart, and Rouanet, Henry (2007) ‘The Norwegian Field of Power *Anno* 2000’, in: *European Societies*, Vol. 9, No. 2, pp. 245-273.

Huizinga, Johan (1938/1955) *Homo Ludens. A Study of the Play Element In Culture*. Boston: The Beacon Press.

Huttunen, Jouko (1992) ‘Father’s impact on son’s gender role identity’, *Scandinavian Journal of Educational Research* 36, pp. 251-260.

Hüsing, Tobias and Selhofer, Hannes (2004) 'Didix: A Digital Divide Index for Measuring Inequality in IT Diffussion', *IT&Society*, Vol. 1, Issue 7 (Spring/Summer), pp. 21–38. Available online at http://www.stanford.edu/group/siqss/itandsociety/v01i07/v01i07a02.pdf on 11.09.2008.

Imhof, Margarete, Vollmeyer, Regina, and Beierlein, Constanze (2007) 'Computer Use And the Gender Gap: The Issue Of Access, Use, Motivation, and Performance', *Computers in Human Behavior* 23, pp. 2823-2837.

Iske, Stefan, Klein, Alexandra, Kutscher, Nadia and Otto, Hans-Uwe (2007) 'Virtuelle Ungleichheit und informelle Bidung. Eine empirische Analyse der Internetnutzung Jugendlicher und ihre Bedeutung für Bildung und gesellschaftliche Teilhabe' [Virtual Inequality and Informal Education. Empirical Analysis of Internet Use by Young People and Its Meaning for Education and Social Participation], in: Otto, Hans-Uwe, Kutscher, Nadia, Klein, Alexandra and Iske, Stefan (eds.) *Grenzlose Cyberwelt? Zum Verhältnis von digitaler Ungleichheit und neuen Bidungszugängen für Jugendliche*. [Borderless Cyberworld? On the Relationship between Digital Inequality and the New Avenues for Education for Young People] Wiesbaden: VS Verlag für Sozialwissenschaften, pp. 65-91.

International Telecommunications Union (2011) *World Telecommunication/ICT Indicators Database*. A database available online at http://data.un.org/Data.aspx?d=ITU&f=ind1Code%3aI99H on 20.04.2012.

Jackson, Linda A., von Eye, Alexander, Biocca, Frank A., Barbatsis, Gretchen, Zhao, Yong and Fitzgerald, Hiram E. (2006) 'Does Home Internet Use Influence the Academic Performance of Low-Income Children?, *Developmental Psychology* Vol. 42, No. 3, pp. 429-235.

Jackson, Linda A., Zhao, Yong, Qiu, Wei, Kolenic, Anthony III, Fitzgerald, Hiram E., Harold, Rena, and von Eye, Alexander (2008) 'Culture, Gender, And Information Technology Use: A Comparison Of Chinese And US Children', *Computers in Human Behavior* 24, pp. 2817-2829.

Jackson, Linda A., von Eye, Alexander, Fitzgerald, Hiram E., Zhao, Yong, and Witt, Edward A. (2010) 'Self-concept, Self-esteem, Gender, Race and Information Technology Use', , *Computers in Human Behavior* 26, pp. 323-328.

JIM (2007) *Jugend, Information, (Multi-)Media. Basisstudie zum Medienumgang 12- bis 19-Jähriger in Deutschland*. [Youth, Information, (Multi-)Media. A Baseline Study on the Media Use of 12 to 19 years old in Germany] Stuttgart: Medienpädagogischer Forschungsverbund Südwest. Available online at http://www.hccfa.org/ktmlstandard/images/uploads/JIM-Studie2007.pdf on 11.09.2008.

Johnson, Steven (2005) *Everything Bad Is Good For You. How Popular Culture Is Making Us Smarter*. New York: Penguin.

Jones, Catherine (1990) 'Hong Kong, Singapore, South Korea and Taiwan: oikonomic welfare states', in: *Government and Opposition*, Vol. 25, No. 4, 446-462.

Jones, Catherine (1993) 'The Pacific challenge: Confucian welfare states', in: Catherine Jones (ed.) *New Perspectives on the Welfare State in Europe*. London: Routledge, pp. 198-217.

Jonsson, Jan O., Grusky, David B., Di Carlo, Matthew, Pollak, Reinhard, and Brinton, Mary C. (2009) 'Microclass mobility: Social Reproduction in Four Countries', *American Journal of Sociology*, Vol. 114, No. 4 (January), pp. 997 – 1036.

Kelly, Kevin (1998) *New Rules for the New Economy: 10 Radical Strategies for a Connected World*. New York: Viking Penguin.

Kennedy, Peter (2008) *A Guide to Econometrics*. Sixth Edition. Malden, MA: Blackwell Publications.

Kingston, Paul W. (2000) *The Classless Society*. Stanford, CA: Stanford University Press.

Kołakowski, Leszek (1978) *Main Currents of Marxism: Its Rise, Growth, and Dissolution.* Oxford: Clarendon Press.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Korupp, Sylvia E., Ganzeboom, Harry B.G. and van der Lippe, Tanja (2002) 'Do Mothers Matter? A Comparison of Models of the Influence of Mother's and Father's Educational and Occupational Status on Children's Educational Attainment', *Quality&Quantity* 36: pp. 17-42.

Krzywdzinski, Martin (2005) 'Die Entwicklung der Klassengesellschaft in Polen. Was bedeuten Klassen in der Transformation?' [The Development of Class Society in Poland. What Do Classess Mean in the Transformation?], *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, Jg. 57, Heft 1, pp. 62-85.

Kuhlemeier, Hans and Hemker, Bas (2007) 'The impact of computer use at home on students' Internet skills', *Computers & Education* 49, pp. 460–480.

Lareau, Annette (2003) *Unequal Childhoods: Class, Race, and Family Life*. Berkley and Los Angeles: University of California Press.

Le Roux, Brigitte and Rouanet, Henry (2004) *Geometric Data Analysis. From Correspondence Analysis to Structured Data Analysis*. Dordrecht: Kluwer Academic Publishers.

Le Roux, Brigitte, Rouanet, Henry, Savage, Mike, and Warde, Alan (2008) 'Class and Cultural Division in the UK', in: *Sociology*, Vol. 42, No. 6, pp. 1049-1071.

Le Roux, Brigitte and Rouanet, Henry (2010) *Multiple Correspondence Analysis* (QASS Series). Thousand Oaks, CA: Sage.

Lebaron, Frédéric (2001) 'Economist and the Economic Order. The Field of Economists and the Field of Power in France', in: *European Societies*, Vol. 3, No. 1, pp. 91-110.

Lebart, Ludovic, Morineau, Alain, and Warwick, Kenneth M. (1984) *Multivariate Descriptive Statistical Analysis: Correspondence Analysis and Related Techniques for Large Matrices*. New York: Wiley.

Lee, Lisa (2008) 'The Impact of Young People's Internet Use on Class Boundaries and Life Trajectories', *Sociology* Volume 42(1): 137–153.

Lee David J. and Turner, Bryan S. (1996) *Conflicts about Class. Debating Inequality in late Industrialism*. London and New York: Longman.

Lemieux, Thomas (2007) *The Changing Nature of Wage Inequality*. NBER Working Paper No. 13523.

Lewis, Jeffrey B. and Linzer, Drew A. (2005) 'Estimating Regression Models In Which the Dependent Variable Is Based on Estimates', *Political Analysis*, Vol. 13, No. 4, Special Issue on Multilevel Modeling for Large Clusters, pp. 345-364.

Livingstone, Sonia (2002) *Young People and New Media: Childhood and the Changing Media Environment*. London: Sage.

Livingstone, Sonia (2006) 'Drawing Conclusions from New Media research: Reflections and Puzzles Regarding Children's Experience of the Internet', *Information Society* 22: 219-230.

Livingstone, Sonia and Bovill, Moira (eds.) (2001) *Children and Their Changing Media Environment: A European Comparative Study.* Hillsdale, N. J.: Lawrence Erlbaum.

Livingstone, Sonia and Helsper, Ellen (2007) 'Gradations in Digital Inclusion: Children, Young People and the Digital Divide', New Media & Society Vol. 9, No. 4, pp. 671–696. Available online at http://eprints.lse.ac.uk/2768/1/Gradations_in_digital_inclusion_(LSERO).pdf on 02.09.2010.

Livingstone, Sonia and Haddon, Leslie (eds.) (2009) *Kids Online: Opportunities and Risks for Children*. Bristol: The Policy Press.

Long, J. Scott (1997) *Regression Models for Categorical and Limited Dependent Variables*, Volume 7 of *Advanced Quantitative Techniques in the Social Sciences*. Thousand Oaks, CA: Sage Publications.

Long, J. Scott and Freese, Jeremy (2003) *Regression Models for Categorical Dependent Variables Using Stata. Revised Edition*. College Station, Tex.: Stata Press.

Lopata, Haworth Z. (1994) *Circles and Settings. Role Changes of American Women*. Albany: State University of New York Press.

Marshall, Gordon, Rose, David, Newby, Howard, and Vogler, Carolyn (1988) *Social Class in Modern Britain*. London: Unwin Hyman.

Marx, Karl (1852/1965) *Der 18. Brumaire des Louis Bonaparte*. (The 18th Brumaire of Louis Bonaparte) Frankfurt am Mein: Insel-Verlag.

Marx, Karl (1867/1976) *Capital.* Vol. I. New York: Penguin.

May, Christopher (2002) *The Information Society. A Skeptical View*. Cambridge: Polity Press.

McCullagh, Peter (1980) 'Regression Models for Ordinal Data (with Discussion)', *Journal of the Royal Statistical Society. Series B (Methodological)* Volume 42 Issue 2, pp. 109-142. Available online at http://www.stat.uchicago.edu/~pmcc/pubs/paper2.pdf on 01.06.2010.

McKelvey, Richard D. and Zavoina William (1975) 'A Statistical Model for the Analysis of Ordinal Level Dependent Variables', *Journal of Mathematical Sociology* Volume 4, pp. 103-120.

Meece, Judith L. (2006) 'Trends in Women's Employment in the Early 21st Century', *Educational Research and Evaluation* Volume 12 Number 4, pp. 297-303.

Merton, Robert K. (1973) 'The Matthew Effect in Science', in: Merton, Robert K. *The Sociology of Science. Theoretical and Empirical Investigations*. Chicago and London: The University of Chicago Press, pp. 439-459.

Midgley, James (1986) 'Industrialisation and welfare: the case of the four little tigers', in: *Social Policy and Administration*, Vol. 20, No. 3, pp. 225-238.

Mossberger, Karen, Tolbert, Caroline J., and Stansbury, Mary (2003) *Virtual Inequality. Beyond the Digital Divide*. Washington, D.C.: Georgetown University Press.

Mossberger, Karen, Tolbert, Caroline J., and McNeal, Ramona S. (2008) *Digital Citizenship. The Internet, Society, and Participation*. Cambridge, MA and London, England: The MIT Press.

Mumtaz, Shazia (2001) 'Children's enjoyment and perception of computer use in the home and the school', *Computers and Education*, Volume 36 Issue 4, pp. 347–362.

Murphy, Raymond (1988) *Social Closure: The Theory of Monopolization and Exclusion*. Oxford: Clarendon Press.

Murtagh, Fionn (2005) *Correspondence Analysis and Data Coding with Java and R.* Boca Raton: Chapman & Hall/CRC.

Negroponte, Nicholas (1995) *Being Digital*. New York: Alfred A. Knopf.

Nelson, Lori J., and Cooper, Joel (1997) 'Gender differences in children's reactions to success and failure with computers', *Computers in Human Behavior*, Volume 13 Issue 2, pp. 247–267.

Nisbet, Robert A. (1959) 'The Decline and Fall of Social Class', *The Pacific Sociological Review*, Vol. 2, No. 1, (Spring), pp. 11-17.

Norris, Pippa (2001) *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge and New York: Cambridge University Press.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Notten, Natascha, Peter, Jochen, Kraaykamp, Gerbert and Valkenburg, Patti M. (2009) 'Research Note: Digital Divide Across Borders – A Cross-National Study of Adolescents' Use of Digital Technologies', in: *European Sociological Review*, Vol. 25, No. 5, pp. 551-560.

NTIA (*National Telecommunications and Information Administration*) (1995) *Falling Through the Net: A Survey of the „Have – Nots" in Rural and Urban America*, Washington, D.C.: U.S. Department of Commerce. Available online at http://www.ntia.doc.gov/ntiahome/fallingthru.html on 02.09.2010.

NTIA (1998) *Falling Through the Net II: New Data on the Digital Divide, Washington*, D.C.: U.S. Department of Commerce. Available online at http://www.ntia.doc.gov/ntiahome/net2/falling.html on 02.09.2010.

NTIA (1999) *Falling Through The Net: Defining the Digital Divide*, Washington, D.C.: U.S. Department of Commerce. Available online at http://www.ntia.doc.gov/ntiahome/fttn99/ on 02.09.2010.

NTIA (2000) *Falling Through the Net: Toward Digital Inclusion*, Washington, D.C.: U.S. Department of Commerce. Available online at http://search.ntia.doc.gov/pdf/fttn00.pdf on 02.09.2010.

NTIA (2002) *A Nation Online: How Americans Are Expanding Their Use of the Internet*, Washington, D.C.: U.S. Department of Commerce. Available online at http://www.ntia.doc.gov/ntiahome/dn/nationonline_020502.htm on 02.09.2010.

OECD (2001) *Knowledge and skills for life. First results from the OECD programme for international student assessment*. Paris: Author.

OECD (2002) *PISA 2000 technical report*. Paris: Author. Available online at http://www.oecd.org/dataoecd/53/19/33688233.pdf on 11.09.2008.

OECD (2005a) *Are Students Ready for a Technology-Rich World?: What PISA Studies Tells Us*. Paris: Author. Available online at http://www.oecd.org/dataoecd/28/4/35995145.pdf on 11.09.2008.

OECD (2005b) *PISA 2003 technical report*. Paris: Author. Available online at http://www.pisa.oecd.org/dataoecd/49/60/35188570.pdf on 11.09.2008.

OECD (2006a) *PISA 2006 Science Competencies for Tomorrow's World*. Volume 1 Analysis. Volume 2 Data. Paris: Author. Available online at http://www.oecd.org/dataoecd/30/17/39703267.pdf (volume 1) and http://www.oecd.org/dataoecd/30/18/39703566.pdf (volume 2) on 11.09.2008.

OECD (2006b) *Assessing Scientific, Reading and Mathematical Literacy: A Framework For PISA 2006*. Paris: Author. Available online at http://www.oecd.org/dataoecd/63/35/37464175.pdf on 11.09.2008.

OECD (2008) *OECD Factbook 2008*. Paris: OECD. Available online at http://puck.sourceoecd.org/pdf/factbook2008/302008011e-07-02-03.pdf on 02.09.2010.

OECD (2009a) *PISA 2006 Technical Report*. Paris: OECD. Available online at http://www.pisa.oecd.org/dataoecd/0/47/42025182.pdf on 02.09.2010.

OECD (2009b) *PISA Data Analysis Manual: SPSS and SAS*. Second edition. Paris: OECD. Available online at http://browse.oecdbookshop.org/oecd/pdfs/browseit/9809031E.PDF on 02.09.2010.

Pakulski, Jan (2005) 'Foundations of a post-class analysis', in: Wright, Erik Olin (ed) *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 152-192.

Pakulski, Jan and Waters, Malcolm (1996) *The Death of Class*. London: Sage Publications.

Parkin, Frank (1979) *Marxism and Class Theory: A Bourgeois Critique*. New York: Columbia University Press.

Perelman, Michael (1998) *Class Warfare in the Information Age*. London: MacMillan.

Peter Jochen and Valkenburg Patti M. (2006) ‘Adolescents’ internet use: Testing the “disappearing digital divide” versus the “emerging digital differentiation” approach’, *Poetics* 34, pp. 293–305.

Pong, Suet-Ling, Dronkers, Jaap and Hampden-Thompson, Gillian (2003) "Family Policies and Children's School Achievement in Single-Versus Two-Parent Families." *Journal of Marriage and Family* 65, pp. 681-699. Available online at http://www.eui.eu/Personal/Dronkers/articles/Journalmarriagefamily2003.pdf on 11.09.2008.

Pontusson, Jonas (2005) *Inequality and Prosperity. Social Europe vs. Liberal America*. Ithaca and London: Cornell University Press.

Popovic, Paula M., Hyde, Karen R., Zakrajsek, Todd, and Blumer, Catherine (1987) ‘The Development of the Attitudes toward Computer Usage Scale’, *Educational and Psychological Measurement*, Volume 47, Number 1, pp. 261-269.

Popovic, Paula M., Gullekson, Nicole, Morris, Samantha, and Morse, Brendan (2008) ‘Comparing Attitudes Towards Computer Usage By Undergraduates From 1986 To 2005’, *Computers in Human Behavior* 24, pp. 986-992.

Poulantzas, Nicos (1974) *Classes in Contemporary Capitalism*. London: Verso.

Poulantzas, Nicos (1978) *State, Power, Socialism*. London: Verso.

Reich, Robert (2007) *Supercapitalism: the Transformation of Business, Democracy, and Everyday Life*. New York: Alfred A. Knopf.

Robins, Kevin and Webster, Frank (1999) *Times of the Technoculture. From the Information Society to the Virtual Life*. London and New York: Routledge.

Rouanet, Henry (2006) ‘The Geometric Analysis of Structured Individuals X Variables Tables’, in: Greenacre, Michael and Blasius Jörg (eds.) *Multiple Correspondence Analysis and Related Methods*. Boca Raton: Chapman & Hall/CRC, pp. 137-159.

Rouanet, Henry, Ackermann, and Le Roux, Brigitte (2000) ‘The Geometric Analysis of Questionnaires: The Lesson of Bourdieu’s *La Distinction*’, in: *Bulletin de Méthodologie Sociologique*, Vol. 65, pp. 5-18.

Shavit, Yossi and Blossfeld, Hans-Peter (eds.) (1993) *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder, Colo: Westview Press.

Schiller, Herbert I. (1996) *Information Inequality*. New York: Routledge.

Standing, Guy (1996) ‘Social Protection in Central and Eastern Europe: a Tale of Slipping Anchors and Torn Safety Nets’, in: Esping-Andersen, Gøsta (ed.) *Welfare States in Transition. National Adaptations in Global Economies*. London: Sage, pp. 225-255.

Starrels, Marjorie E. (1992) ‘Attitudes similarity between mothers and children regarding maternal employment’, *Journal of Marriage and the Family* 54, pp. 91-103.

Sørensen, Annemette (1994) ‘Women, family, and class’, *Annual Review of Sociology* 20, pp. 27-47.

Smith M. Dwayne, and Self, George D. (1980) ‘The congruence between mother’s and daughter’s sex-role attitudes: A research note’, *Journal of Marriage and the Family* 42, pp. 105-109.

Tapscott, Don (1998) *Growing Up Digital: The Rise of the Net Generation*. New York: McGraw-Hill.

Tapscott, Don (2008) *Grown Up Digital. How the Net Generation Is Changing Our World.* New York: McGraw-Hill Professional.

Teo, Timothy (2008) ‘Assessing the Computer Attitudes of Students: An Asian Perspective’, *Computers in Human Behavior* 24, pp. 1634-1642.

Therborn, Göran (2002) 'Class Perspectives: Shrink or Widen?', *Acta Sociologica*, 45: 3, 221 – 225.

Tichenor, Phillip J., Donohue, George A., and Olien, Clarice N. (1970) ‘Mass Media Flow and Differential Growth in Knowledge’, *The Public Opinion Quarterly*, Vol. 34, No. 2 (Summer), pp. 159-170.

Tsai, Meng-Jung and Tsai, Ching-Chung (2010) ‘Junior High School Students’ Internet Usage and Self-efficacy: A Re-Examination of the Gender Gap’, *Computers & Education* 54, pp. 1182-1192.

UNESCO Institute for Statistics (2008) *Data Centre: Public Reports - Education* [Internet], available from http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=167 on 02.09.2010.

UNICEF (2010) ‘The Children Left Behind. A League Table of Inequality in Child Well-Being in the World’s Rich Countries’, *Innocenti Report Card 9*, UNICEF Innocenti Research Centre, Florence. A report available online at http://www.unicef-irc.org/publications/pdf/rc9_eng.pdf on 01.09.2011.

Updegraff, Kimberly A., McHale, Susan M. and Crouter, Ann C. (1996) ‘Gender roles in marriage: What do they mean for girls’ and boys’ school achievement’, *Journal of Youth and Adolescence* 25, pp. 73-88.

Van Dijk, Jan (2000) ‘Widening Information Gaps and Policies of Prevention’, in: Hacker, Kenneth and Van Dijk, Jan (eds.) *Digital democracy. Issues of Theory and Practice*, Thousand Oaks, CA: Sage Publications, pp. 166 – 183.

Van Dijk, Jan (2005) *The Deepening Divide. Inequality in the Information Age*. London: Sage Publications.

Van Dijk, Jan (2006) *The Network Society: Social Aspects of New Media*. Second edition. London: Sage Publications.

Van Dijk, Jan (2009) ‘One Europe, Digitally Divided’, in: Chadwick, Andrew and Howard, Philip N. (eds.) *Handbook of Internet Politics*. London and New York: Routledge, pp. 288-304.

Van Dijk, Jan and Hacker, Kenneth (2003) ‘The Digital Divide as a Complex and Dynamic Phenomenon’, *The Information Society*: 19, pp. 315 – 326.

Van Langen, Annemarie, Bosker, Roel and Dekkers, Hetty (2006) ‘Exploring Cross-National Differences in Gender Gaps in Education’, *Educational Research and Evaluation* Volume 12 Number 2, pp. 155-177.

Van Meter, Karl M., Schlitz, Marie-Ange, Cibois, Philippe, and Mounier, Lisa (1994) ‘Correspondence Analysis: A History and French Sociological Perspective’, in: Greenacre, Michael and Blasius Jörg (eds.) *Correspondence Analysis in the Social Sciences: Recent Developments and Applications*. San Diego: Academic Press, pp. 3-22.

Vekiri, Ioanna and Chronaki, Anna (2008) ‘Gender issues in technology use: Perceived social support, computer self-efficacy and value beliefs, and computer use beyond school’, *Computers & Education* 51, pp. 1392-1404.

Volman, Monique and van Eck, Edith (2001) ‘Gender equity and information technology in education: The second decade’, *Review of Educational Research*, 71(4), pp. 613–634.

Volman Monique, van Eck Edith, Heemskerk Irma, Kuiper Els (2005) ‘New technologies, new differences. Gender and ethnic differences in pupils’ use of ICT in primary and secondary education’, *Computers & Education* 45, pp. 35–55.

Walicki, Andrzej (1995) *Marxism and the Leap to the Kingdom of Freedom: the Rise and Fall of the Communist Utopia*. Stanford, Calif.: Stanford University Press.

Wallerstein, Immanuel (1974) *The Modern World-System, vol. I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York/London: Academic Press.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Wallerstein, Immanuel (1979) *The Capitalist World-Economy*. Cambridge: Cambridge University Press.

Wallerstein, Immanuel (1980) *The Modern World-System, vol. II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750*. New York: Academic Press.

Wallerstein, Immanuel (1989) *The Modern World-System, vol. III: The Second Great Expansion of the Capitalist World-Economy, 1730-1840's*. San Diego: Academic Press.

Warschauer, Mark (2003) *Technology and Social Inclusion. Rethinking the Digital Divide*. Cambridge, MA and London, England: The MIT Press.

Weber, Max (1921/2001a) 'Class, Status, Party' in: Grusky, David B. (ed.) *Class, Race, and Gender. Social Stratification in Sociological Perspective*. Second edition. Boulder: Westview Press, pp. 132-142.

Weber, Max (1921/2001b) 'Status Groups and Classes' in: Grusky, David B. (ed.) *Class, Race, and Gender. Social Stratification in Sociological Perspective*. Second edition. Boulder: Westview Press, pp. 142-145.

Webster, Frank (2005) 'Making Sense of the Information Age. Sociology and Cultural Studies', *Information, Communication&Society* Vol. 8, Number 4 (December), pp. 439-458.

Weeden (2002) 'Why Do Some Occupations Pay More Than Others? Social Closure and Earnings Inequality in the United States', *American Journal of Sociology* Vol. 108 No. 1 (July), pp. 55–101.

Weeden, Kim A., and Grusky, David B. (2005a) 'The Case for a New Class Map', *American Journal of Sociology* Vol. 111, No. 1: pp. 141-212.

Weeden, Kim A., and Grusky David B. (2005b) 'Are There Any Social Classes at All?', in: Bills David (ed.) *The Shape of Social Inequality: Stratification and Ethnicity in Comparative Perspective*. Volume 22, *Research in Social Stratification and Mobility*. Amsterdam: Elsevier, pp. 3-56.

Weeden, Kim A., Kim, Young-Mi, Di Carlo, Matthew and Grusky, David B. (2007) 'Social Class and Earnings Inequality', *American Bahavioral Scientist* Vol. 50, No. 5, pp. 702-736.

Weininger, Elliot B. (2005) 'Foundations of Pierre Bourdieu's class analysis', in: Wright, Erik Olin (ed.) *Approaches to Class Analysis*. Cambridge: Cambridge University Press, pp. 82-118.

Weller, Susan C. and Romney, A. Kimball (1990) *Metric Scaling: Correspondence Analysis* (QASS Series). Newbury Park, CA: Sage.

Wesołowski, Włodzimierz (1978) *Classes, Strata and Power*. London: Routledge.

West, Patrick, Sweeting, Helen, and Speed Ewen (2001) 'We Really Do Know What You Do: A Comparison of Reports from 11 Year Olds and Their Parents in Respect of Parental Economic Activity and Occupation', *Sociology* Vol. 35, No. 2, pp. 539-559.

Wheen, Francis (2006) *Marx's 'Das Kapital': A Biography*. London: Atlantic Books.

Wilson, David S. (2008) *Evolution for Everyone. How Darwin's Theory Can Change the Way We Think About Our Lives*. New York: Delta Trade Paperbacks.

Worldbank (2010) *World Development Indicators (WDI) 2010 Online* [Internet], available from http://data.worldbank.org/indicator/NY.GDP.PCAP.CD on 02.09.2010.

Wright, Erik O. (1978) *Class, Crisis and the State*. London: New Left Books.

Wright, Erik O. (1979) *Class Structure and Income Determination*. New York: Academic Press.

Wright, Erik O. (1980a) 'Class and Occupation', *Theory and Society* 9, pp. 177-214.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
European University Institute DOI: 10.2870/46469

Wright, Erik O. (1980b) 'Varieties of Marxist Conceptions of Class Structure', *Politics and Society* 9:3, pp. 323-370.

Wright, Erik O. (1985) *Classes*. London: Verso.

Wright, Erik O. (1996) 'The Continuing Relevance of Class Analysis', *Theory and Society* 25, pp. 697-716.

Wright, Erik O. (1997) *Class Counts: Comparative Studies in Class Analysis*. Cambridge: Cambridge University Press.

Wright, Erik O. (2000) 'Working-Class Power, Capitalist-Class Interests and Class Compromise', *American Journal of Sociology* 105: 4 (January), pp. 957-1002.

DRABOWICZ, Tomasz Piotr (2012), Digital Inequalities as Class Inequalities? A comparison of youth in advanced societies in-and outside Europe
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