



The sources of political orientations in post-industrial society: social class and education revisited

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Abstract

This paper studies the impact of social class and education on political orientation. We distinguish the 'old' middle class from a new class of social/cultural specialists. However, the difference in their political orientation may especially be related to the level and field of education; the new middle class is more highly educated and often in fields of study that extensively address social competencies, characteristics independently affecting political outcomes. Analyses on Dutch data showed that education is more important in the prediction of 'cultural' liberal issues than social class. Economically-oriented issues are more strongly affected by social class. This means that interests of the new middle class are served by liberal standpoints relating to a strong government and income redistribution policies, but not relating to cultural issues.

Keywords: Education; social class; field of study; attitudes; voting behaviour; social participation

Introduction

Social scientists have long acknowledged the importance of education in the shaping of attitudes, norms, and values. With regard to political preferences, however, there tends to be a focus on social class rather than education. Recently the focus on class has been disputed because extensive international comparisons show a decline in class voting (cf. Clark and Lipset 2001; Nieuwebeerta and De Graaf 1999), although many still claim that for some countries class is as important as it ever was (cf. Evans 1999). This debate has led to suggested improvements from new class theory that social class schemes must be updated for post-industrial society that separates a new middle class

of ‘social and cultural specialists’ from older factions (cf. Butler and Savage 1995; Esping-Andersen 1993, 1999; Hout, Brooks and Manza 1995; Kriesi 1989; Manza and Brooks 1999).

As Brint (1984) argued, however, it is not at all clear whether this new class is the source for political orientations, or whether it is a faction of the middle class that is more strongly attached to education. Alongside differences in educational level, an important educational difference between ‘old’ and ‘new’ middle classes is the *field of study* in which people were educated. We will argue that especially in fields of study that address social and communication skills, people develop left-wing and tolerant orientations. Interestingly, it is the new middle class that has been trained in these fields and which has also rather left-wing political orientations. Since field of study, in addition to educational level, shapes political preferences (Crotty 1967; Guimond, Begin and Palmer 1989), a proper test of the argument as to whether the new middle class is indeed a new class or a group that only differs in its educational experience should thus include both educational level and field of study. We start with three research questions: (1) Whether higher educational levels and fields of study that train students in social skills lead to a tolerant (i.e. liberal) socio-political orientation, (2) to what extent social class accounts for differences in socio-political orientation, and (3) to what extent effects under (2) are prevalent when we take into account that individuals in the ‘new class’ are often educated at a high attainment level and in fields of study that extensively teach social skills.

These questions will be answered using survey data from the Netherlands. In the Netherlands, specialization in fields of study is possible throughout the educational system from lower secondary up to tertiary level. Thus, variation in fields of study does not only exist at the higher segments of the educational system, like in Anglo-Saxon and Scandinavian countries, but also at the lower ones. Therefore, claims regarding the impact of socially-oriented fields on value formation can be tested for a large group of the population of a country, and not only for the university elite.

The new middle class and political orientation

Several scholars have proposed that two factions of the middle class should be separated into two separate classes: an ‘old’ faction consisting of managers and technocrats, and a new middle class consisting of ‘knowledge workers’. Both the structural location and the (political) attitudes of these classes differ fundamentally. Already in the 1970s some theorists have tried to explain the rise of left-wing ideas in parts of the (educated) middle class (Brint 1984; Bruce-Biggs 1979). They suggested ‘a struggle for power and status in American society between a rising “new class” of “knowledge workers” and a

still dominant “old class” of business owners and executives’ (Brint 1984: 31). This suggestion of a rising new class is related to the growth of occupational groups such as human service and social-cultural professionals. This growth is related to the decline of the industrial sector in the (post-industrial) economy and the rise of the service sector.

Brint (1984) compares various conceptualizations of the new middle class, and concludes that the new class is not a class at all, but an occupational-based segment of a broader class grouping. The liberal attitudes of some middle-class occupational groups (e.g. those that are not directly instrumental to profit maximization like arts, education, social and other services) are largely due to higher education. Lamont (1987) disagrees with this conclusion, however. She argues that these liberal attitudes can be explained by the common class situation of the ‘relatively autonomous cultural capital workers’ (Lamont 1987: 1505). In her words

The common interests of relatively autonomous cultural capital workers are to maintain and increase their autonomy and to expand the non-profit realm by encouraging the development of the public sector, promoting policies to increase business taxation, and supporting values and political ideologies that favour non-economic aspects of social life, such as postmaterialist values, environmentalism, or New Left politics. (Lamont 1987: 1504)

Others seem to support Lamont’s view. Kriesi (1989), for example, concludes that the faction of ‘social/cultural specialists’ are much more likely to join new social movements than more ‘technocratic’ factions of the middle class. For Britain, Savage (1991) found that the voting behaviour of several occupational groupings within the middle class depends on the sector of employment. Managerial and occupational groups working within the public sector are much more inclined to vote for the Labour Party than occupational groupings working within the private sector. There is also a large difference between occupational groupings in nationalized industries (who far more support the Conservatives) and occupational groupings in the ‘real’ public sector. Savage concludes that ‘the crucial structural factor ensuring middle-class political fragmentation lies in the different relationship of middle-class groups towards the state’ (Dunleavy and Husbands 1985; Savage 1991: 48). Moreover, Güveli, Need and De Graaf (2003) found that the political orientation of the social and cultural specialists has become more crystallized from 1970 onwards. This is important, because according to class formation theory, it takes time for a class to get a high degree of demographic identity (Goldthorpe 2000).

The literature review above suggests that there is ample *empirical* evidence to conclude that cleavages between occupational groupings within the service class exist. However, are these cleavages class-based in a *theoretical* sense? De

Graaf and Steijn (1997) argue that the 'old' and 'new' middle classes seem to have different employment relations and that some professional occupational groups are more reliant on the state than others. Reliance on the state is an important element of the market situation of people for several reasons. First, because there is a relationship between economic sector (private or public) and income. Secondly, some specialists are dependent on the public sector for their employment. It is very difficult for social scientists, teachers and nurses, at least in the Netherlands, to obtain a job in the private sector, especially when their occupational career has started in the public sector. Furthermore, these occupational groups are especially threatened by the cuts in the budgets of the public sector, which are the result of the dominance of the market-orientation in economic policy in Western societies (see also Güveli, Need and De Graaf 2003).

Also Goldthorpe's class theory of employment relationships may serve as a basis for separating the new from the old middle class (1982; 2000; Erikson and Goldthorpe 1992). Goldthorpe's service class is characterized by work that is hard to monitor (both quality and quantity), and there is a high degree of specificity of human capital (e.g. education) involved. In contrast, the working classes comprise types of work that are less difficult to monitor, and have less specific human capital requirements. These differences induce different employment contracts for the two (extreme) groups: longer term, diffuse exchange of labour and compensations for service classes, and hourly wages with limited longer term prospects and pension schemes for working-class workers. Although the service class in Goldthorpe's schema groups together our 'old' and 'new' factions of the middle class, monitoring problems and human capital specificity do themselves lead to promote a distinction between the two groups. The types of work in the class of social/cultural specialists are more difficult to monitor than work in market environments; simply because the dimension along which achievements should be judged is more vague in the public sector – and particularly jobs in the social/cultural specialist class – than in the private sector. In private industries quality and quantity of work is predominantly measured by economic value (profits, stock value). It is, for example, much harder to judge the quality and quantity of work of a psychologist. A more important difference than monitoring between the old middle class and the social/cultural specialists is, however, the degree of specificity of human capital; our argument is precisely that social/cultural specialists differ strongly in educational qualifications, particularly in fields of study. Furthermore, not only the educational achievements differ, but also the degree to which it is necessary to have the right field of study for entering jobs. It is impossible to become a teacher or medical doctor without the right qualifications, whereas linkages are less strong in private industries. Employers of new middle-class employees have therefore high incentives to keep people

with the right qualifications, which might explain the varying level of career mobility across employment sectors (Haller et al. 1985).

Education and political orientation

Two theories on the impact of education on political values and attitudes deserve attention. The first theory, the cognitive model, holds that education increases cognitive qualities that broaden the students' horizon by giving them the ability to look at social issues from different points of view (Hyman and Wright 1979). Education expands the frame of reference, and stimulates cognitive ability and rational thinking (Nunn, Crockett and Williams 1978). Following this model, people from higher educational levels tend to be more tolerant through processes of 'enlightenment' (Nie, Junn and Stehlik-Barry 1996). However, the cognitive model has been refuted on the basis of country differences in the association between education and liberalism (Weil 1985) or differences across types of issues (cf. Phelan et al. 1995). In addition, it is hard to predict field-of-study differences with the cognitive model; it seems unlikely that, at the same educational level, fields of study differ in the extent that cognitive abilities are enlarged or that rational thinking is stimulated. Moreover, if fields of study were to differ in these respects, the natural sciences may be seen as most rationalized, and thus as leading to more tolerance, rather than the more socially oriented fields of study that are generally believed to enlarge tolerance (Crotty 1967; Guimond, Begin and Palmer 1989; Pascarella and Terenzini 1991).

The second theory, socialization theory, holds that education *socializes* students in their political orientation. Just like more objective types of knowledge are taught, like history or geography, attitudes are also socialized upon the consumers of education (Phelan et al. 1995). If education affects attitudes through processes of socialization and internalization both educational-level differences and field-of-study differences are to be expected. In higher educational levels, the view is challenged that the world is self-justifying, and instead, a view is promoted that social reality is an ongoing human product in which individual action can make a difference (Gabennesch 1972). Clear support for the idea that knowledge is important in this socialization process is provided by Stephan and Stephan (1984), who showed that knowledge about other cultures makes people more positive about ethnic minorities. Furthermore, differences in tolerance across fields of study may be expected because

if, as in the humanities and the social sciences, the academic focus is on social and political problems and the student is forced to think through the ramifications of ideas in more abstract, non-vocationally oriented terms, his

understanding of and appreciation for [libertarian] democratic values may increase. (Crotty 1967: 208)

Guimond, Begin and Palmer (1989) examined, from the socialization perspective, whether fields of study differ in the extent that students attribute individual unsatisfactory life circumstances to either the person in question or society. They argued that social fields of study socialize students into the point of view that social structure often plays a large role in determining personal situations. Students of more technocratic fields more often hold the opinion that people themselves should be blamed for their own circumstances. These students' labour market focus, which will result in good positions in society eventually, makes it unlikely that they will suffer bad life conditions. This makes it more attractive to adopt the view that success and failure are entirely attributable to individual effort.

The underlying mechanism of how field differences affect attitudes has been given little attention. The most consistent claims argue that education forms a source of 'social learning' (McClosky and Brill 1983), that has an *enduring* effect across the life course (Hyman and Wright 1979), but it still remains unclear how processes of social learning develop and why. We claim that fields of study that prepare students for jobs where interaction with other individuals is important, e.g. in social and personal care, teacher education, but also (para-) medicine, address social skills. More precisely, if students become acquainted with the reasons for other people's motives for their behaviour, they will be better able to understand and appreciate other people's standpoints. Some fields of study extensively address these kinds of social skills aimed at the well-being of other individuals. Other types of social skill, aimed primarily at 'convincing' others for a business relationship, are not directly enlarging social learning in our conception of social-psychological skills. The skills addressed should primarily be aimed at understanding others from a perspective to increase other people's well-being, rather than an economic (self-interest) perspective.²

Education and social class

There is a large empirical overlap between education and social class; people with higher levels of schooling end up in higher social classes, and people belonging to the new middle classes of social/cultural specialists seem to be overly recruited from specific fields of study within educational levels. This can be seen particularly in the new faction of the *lower* service class (e.g. teachers, nurses) which is educated in fields of study where extensive attention has been devoted to the social capabilities to teach, help or cure other individuals. Within the *higher* service class, there are plausibly field differences as well,

but there these field differences are less easily understood in terms of social-communicative skills. Rather, the difference between the types of education leading to new and old sections of the higher service class (e.g. social sciences versus business economics) is merely a matter of societal knowledge. Given the strong empirical overlap and the theoretical mechanisms predicting class and education effects, in order to judge the explanatory power of a new class scheme it is highly important to include detailed measures of educational level and the social component of fields of study into empirical models.

In order to understand the relative importance of education and class, it seems valuable to distinguish between socio-political orientations of a more cultural kind and those of a more economic kind (De Witte 1999; Houtman 2001; Lipset 1981). Cultural liberalism generally refers to issues like attitudes towards gender roles, abortion and euthanasia; all of which are only loosely related to the production of economic wealth. Liberal attitudes in this respect refer to support for individual freedom, whereas cultural conservatism restrains freedom on these issues. Education can be expected to be a main influential factor here (Emler and Frazer 1999).³ Cultural issues that we will address here are attitudes towards the gender roles and membership of socially responsible organizations.

Economic liberalism, or progressivism, concerns issues related to 'the market', such as the distribution of wealth, the rights of the unemployed, and attitudes towards the role of the welfare state. Here a conservative attitude points towards 'opposition towards socio-economic equality' (Scheepers, Ester and De Witte 1999); indicated by a plea for limited governmental interference, such as in the redistribution of wealth. For economic issues it can be expected that social class is more important; in line with Lipset's (1981) economic interest hypothesis it is one's socio-economic position that determines one's position on these issues. Economic issues that are studied are attitudes towards the income distribution and a voting intention for a left-wing political party.⁴

Before we proceed with our hypotheses and research design, we should consider one other explanation of observed differences in socio-political orientations among fields of study and social classes. We do not empirically test this explanation but it should be kept in mind as an alternative for our understanding of the empirical findings. This explanation states that people choose educational routes and occupations on the basis of personal characteristics and attitudes they have developed in their youth. For example, Holland (1985) shows that people make vocational choices based on personality characteristics, which might affect political preferences independently. However, a meta-analysis of Pascarella and Terenzini (1991) showed that education (level and field) is not only correlated to political preferences, but also *shapes* them. In addition, much of the influence on political preferences before making educational and occupational choices comes from the family, for which

we include controls (see below). Earlier research that concentrated on the impact of education on labour, consumption and political orientation, has shown that personality traits do *not* bias the effects of education in the Netherlands (Van de Werfhorst and Kraaykamp 2001). However, we must realize that we cannot be fully sure that social class and education causally influence socio-political outcomes. The best we can do is to control for possible disturbing factors, and attach to already very extensive political orientation models such as that developed in the seminal study of Dunleavy and Husbands (1985), who, like us, focus on social origin, education and class position as the crucial determinants.

Hypotheses

The discussion above leads to the following hypotheses:

1. Education (level and field of study) has a stronger impact on socio-political orientations of a cultural kind than social class (*strength of education effect*);
2. People qualified at higher educational levels and in fields of study that address social-communicative competencies, are generally more liberal/progressive on cultural and economic issues than people of lower qualifications and of fields of study that hardly address social-communicative competencies, respectively (*sign of education effect*);
3. Social class, including differentiation between 'new' and 'old' middle classes, has a stronger impact on socio-political orientations of an economic kind than education (*strength of class effect*).
4. People in the new middle classes are generally more liberal/progressive on cultural and, in particular, economic issues than people in the 'old' factions of the middle classes (*sign of class effect*).

Data and measurements

Data

The data we use come from the 1992/93, 1998 and 2000 Family Surveys of the Dutch Population (FSDP).⁵ These surveys look at aspects of the life course and life situation of the Dutch-speaking population of the Netherlands between the ages of 18 and 70. Primary respondents and, if married or cohabiting, their partners were interviewed with exactly the same technique: an oral interview followed by a self-administered questionnaire. The sample of primary respondents was drawn randomly from population registers of a

stratified sample of Dutch municipalities (stratified with respect to region and urbanization).

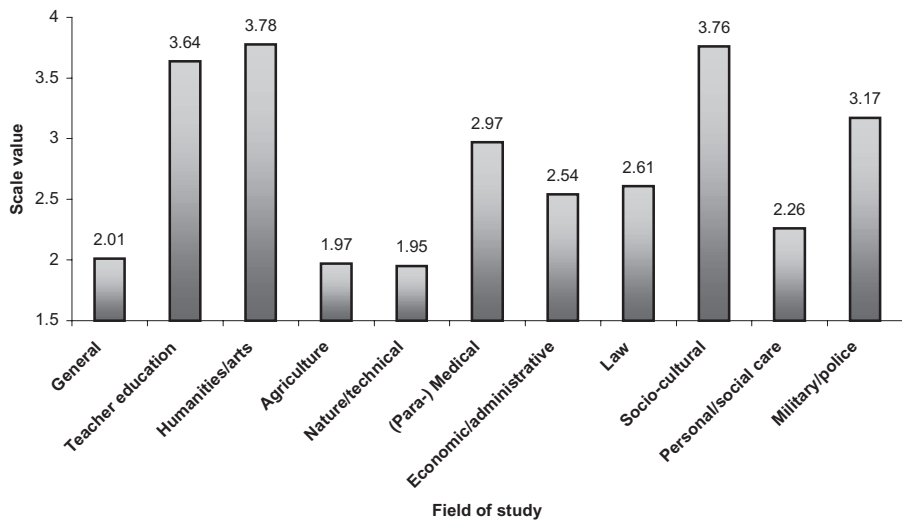
Three of our four dependent variables (see below) are available in two data sets only. In order to ensure that respondents have finished their educational career we selected respondents of 25 years and older only. The number of valid observations is 1250 for the 1992/93 data set; 1724 for 1998; and 1286 for 2000; making a total of 4260 cases.

Measurements

Field of study: To rank fields of study with regard to the social skills they supply to their students we use the FSDP 1998 survey. In the FSDP 1998, a list of four types of communicative competencies was presented to respondents: (1) Knowledge on communication/instruction; (2) Knowledge on social psychology/teaching methods; (3) Discussion techniques/group conversation; and (4) Presentation skills/public speaking. The respondents had to indicate to what extent their (highest completed) education devoted attention to these competencies. Thus, respondents were not supposed to rate their own level of competence, but the attention devoted to it in their education (answer categories varied from 1 to 5). Cronbach's alpha of the four items is 0.83. Our measurement for communicative competencies is an average score on the four items.⁶ We believe that this scale captures most, if not all, of the effect of field of study on socio-political orientations. Earlier research has included three other types of competencies addressed in fields of study (cultural, economic and technical) but communicative competencies were the only type that substantially affected a wide range of attitudes in a multivariate model (Van de Werfhorst and Kraaykamp 2001).

Figure I shows the value of communicative competencies assigned to fields of study this way. Fields that strongly address communicative qualities are teacher education, para-medical training, socio-cultural training, and police/military training.⁷

Social class: We identified the occupations of the social and cultural specialists on the basis of the four digit occupational classification of the Dutch Central Bureau of Statistics. We use De Graaf and Steijn's (1997) adjustment of the Erikson and Goldthorpe class scheme. The Erikson and Goldthorpe class scheme has evolved to be the standard indicator of class positions in international research (Erikson and Goldthorpe 1992; Ganzeboom, Luijkx and Treiman 1989; Ishida, Müller and Ridge 1995; Shavit and Müller 1998). The adjustment we apply consists of distinguishing public-sector social/cultural specialists from other groups within the service classes (classes I and II). Only those respondents who (a) fall into the class of social and cultural

FIGURE I: *Communicative competencies by field of study*

specialists, and (b) work in the public sector belong to the new class. Our class scheme distinguishes eight classes: the higher controllers (Ia); the higher social and cultural specialists (Ib); the lower controllers (IIa); the lower social and cultural specialists (IIb); routine non-manual labour (III); the self employed, including self-employed farmers (IV); manual foremen, supervisors and skilled manual workers (V & VI); and semi/unskilled and agricultural workers (VII).⁸

Other independent variables: The analyses contain three additional blocks of independent variables. Firstly, demographic characteristics *gender* (female = 0, male = 1) and *year of birth* are included (1922 = 0, divided by 10 for ease of interpretation of coefficients). Second, *educational level* is included, measured in dummy variables for five clearly distinguishable levels: primary education, lower secondary education (not giving access to tertiary education), upper secondary education (giving access to tertiary education), vocational college and university (both tertiary level). Third, in an additional analysis not shown here, we controlled for parental background.⁹

Dependent variables: We test our argument on four dependent variables. First we look at attitudes towards the gender distribution of household and family tasks (*gender role attitude*). We developed a scale on four items, each with five answer categories varying from ‘agree strongly’ to ‘disagree strongly’: (1) ‘A woman is better suited for raising young children than a man’; (2) ‘If a man thinks his wife should not work, she has to accept that’; (3) ‘Women with children should only look for paid work if they are certain they will still have

enough time left for their children'; (4) 'A mother should be home when her children return from school'; Cronbach's $\alpha = 0.73$. We took the standardized average score on the four items (mean = 0, standard deviation = 1). The variable is constructed so that a high score reflects a more liberal attitude.

Secondly, we examine the *attitude towards the income distribution* in the Netherlands. Two items were available, again with five answer categories from 'strongly disagree' to 'strongly agree': (1) 'The difference between high and low incomes should become bigger than is currently the case'; and (2) 'In the Netherlands, unemployment benefits are too high'. The correlation between these two items is with $r = 0.27$ not particularly high (Cronbach's $\alpha = 0.43$). Analyses on the separate items, though, yield similar results. This attitude scale consists of the standardized average score on the two items (mean = 0, standard deviation = 1), and is coded in such a way that a high score reflects a progressive standpoint towards redistribution.

Left-wing voting intention at national elections is operationalized with three categories. Respondents were asked to name the party they would vote for if there were national elections today. Voting intentions for the Labour Party (PvdA), Green-Left, or the Socialist Party are considered left-wing (i.e. values 4 and 5 on the ISJP measure of parental voting intention, ISJP 1993). Other parties form another category. People who responded that they did not know whom to vote for or who would not vote form the third category. We only report parameters of a multinomial logistic regression that contrast left-wing versus other political party preference.

The fourth dependent variable is membership of *socially responsible organizations* like human rights or refugee work organizations. Based on Guimond, Begin and Palmer (1989), our theory clearly specifies that people in socially-oriented fields of study develop a tolerant orientation *because* students are equipped with skills that make them support the standpoint that individual problems are not (only) the responsibility of the individual in question, but that society also has a responsibility for the well-being of individuals. One consequence of such an opinion may be to subscribe to organizations that advance the well-being of other individuals. It has the value 1 for people who are members or supporters of these kinds of organizations (actively or passively), and 0 otherwise.

Results

Education and social class

Table I displays the cross-classifications of social class and educational characteristics (educational level and field of study). The upper part of Table I shows that a large part of the new middle classes of social/cultural specialists

TABLE I: *Cross-classifications of educational characteristics and social class (relative frequencies and scale values)*

	Social Class								Total
	Ia	Ib	IIa	IIb	III	IV	V&VI	VII	
	Higher controllers	Higher soc/cult. spec.	Lower controllers	Lower soc/cult. spec.	Routine non-manual	Self-employed	Skilled manual	Unskilled manual	
<i>Educational level</i>									
Primary	4.2		4.1	1.5	10.7	16.9	15.3	32.8	12.5
Lower secondary	13.3	3.1	14.1	2.3	33.0	33.1	41.9	39.7	25.9
Upper Secondary	28.5	9.4	36.0	18.6	41.7	37.7	36.6	24.0	32.1
Vocational college	29.4	25.0	33.7	63.8	12.2	9.1	5.5	2.9	21.1
University	24.6	62.5	12.1	13.7	2.4	3.2	0.6	0.5	8.3
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
<i>Field of study</i>									
General	7.2	0.3	11.5	1.9	35.8	4.3	8.7	30.3	100%
Teacher education	5.5	2.1	15.8	61.6	7.9	0.7	2.1	4.5	100%
Humanities/arts	8.9	1.4	24.0	30.8	23.3	1.4	3.4	6.8	100%
Agriculture	10.9	2.9	8.7	2.2	10.9	29.7	13.0	21.7	100%
Technical/nature	20.5	0.8	19.2	3.0	8.2	2.8	32.1	13.4	100%
(Para-) medical	10.7	7.6	26.2	24.3	24.0	1.3	0.9	5.0	100%
Economic/ administration	17.4	0.2	19.2	3.8	44.6	2.5	3.6	8.8	100%
Law	38.6	3.6	27.7	4.8	20.5	2.4	2.4	0.0	100%
Social-cultural	14.9	8.8	21.6	33.8	10.8	1.4	1.4	7.4	100%
Social and personal care	2.3	0.2	4.1	8.8	37.0	2.3	5.4	39.9	100%
Police/military	10.3	0.0	26.8	5.2	20.6	3.1	13.4	20.6	100%
Total	12.2	1.5	16.2	11.1	25.5	3.6	11.5	18.5	100%
<i>Communicative educational skills</i>									
	2.31	2.93 ^a	2.45 ^b	3.09 ^{c,d}	2.24	1.99	1.93	1.87	2.27

Source: Family Surveys of the Dutch Population, 1992/93, 1998, 2000 (N = 4,260).

Notes

^asignificantly higher than Ia at $p < 0.01$ ($t = -7.93$).

^bsignificantly higher than Ia at $p < 0.01$ ($t = -3.82$).

^csignificantly higher than IIa at $p < 0.01$ ($t = -16.38$).

^dnot significantly different from Ib at $p < 0.05$ ($t = -1.77$).

is recruited from vocational college (lower social/cultural specialists; 63.8 per cent) and from university (higher social/cultural specialists; 62.5 per cent). These percentages are substantially lower for the 'older' middle classes of controllers (33.7 and 24.6, respectively). As regards field of study, we can see that many of the people educated in communication-oriented fields of study are employed in the new service classes Ib and IIb. The opposite is true for people who obtained marketable skills in education, like in economically oriented programmes and law. Among them, the majority is employed within the older sections of the service classes.

Our measure for communicative educational skills shows similar results (see Table I); the two classes of social and cultural specialists score significantly higher on communicative competencies than the older, more market-oriented factions of the service class. Differences between higher and lower social/cultural specialists are negligible. So, the general pattern is that the distinction in old and new service classes is relevant as far as educational background is concerned.

Cultural issues

In Table II, the results are depicted for our multivariate analyses on cultural issues: a tolerant (equity-based) gender role attitude and membership of socially responsible organizations. In model 1, control variables plus educational variables are included. Model 2 replaces the educational variables with the class dummies. Model 3 includes both educational and class variables.

Education has a strong effect on the attitude that people have with regard to gender roles. People of higher levels of schooling and educated in socially-oriented fields of study are more strongly in favour of equal roles for men and women than people of lower qualification levels and with a smaller social component in their studies. Much of the education effect remains when we control for social class (model 3), indicating that only a small fraction of the education effect is indirect via social class. Social class has a rather strong effect on gender role attitudes if we do not control for education (model 2). The new middle classes of social/cultural specialists have a much more equity-based gender role attitude than the old factions of the middle class. The working classes and the self-employed class are relatively conservative regarding gender roles, which corroborates earlier findings that the less advantaged classes are more conservative as regards cultural issues (Lipset 1981; Middendorp 1978). In model 3 it appears that a significant part of the differences *within* the middle class is attributable to educational differences, in line with Brint's (1984) conclusions (model 3).¹⁰ Also the conservative attitude of working-class members is for a large part attributable to educational differences. In short, we may conclude that education seems more important than social class, but both concepts are needed to get a clear picture of the formation of cultural values.¹¹

Our second 'culturally oriented' dependent variable is membership of socially responsible organizations (Table II). Education has a substantial effect on membership of organizations such as human rights or refugee organizations, with particularly low likelihoods of membership for people with non-tertiary qualifications (model 1). Also communicative educational skills have the expected effect. In model 3 the educational level effect remains substantively and statistically significant, but the effect of communicative educational skills drops below conventional statistical significance ($0.05 < p < 0.10$

TABLE II: Regression coefficients of cultural issues on selected independent variables

Dependent variable	Gender role attitude ^a				Membership of socially responsible organizations ^b							
	B	SE	B	SE	B	SE	B	SE	B	SE		
Intercept	-0.740***	0.130	-0.495***	0.069	-0.599***	0.136	-1.261**	0.462	-0.925***	0.247	-1.026*	0.489
Male	-0.235***	0.034	-0.193***	0.038	-0.209***	0.038	-0.415**	0.137	-0.398**	0.145	-0.402**	0.150
Year of birth	0.239***	0.015	0.271***	0.015	0.240***	0.015	-0.295***	0.058	-0.235***	0.056	-0.288***	0.058
Educational level												
Primary	-0.503***	0.092			-0.387***	0.096	-1.219**	0.388			-0.858*	0.405
Lower secondary	-0.515***	0.056			-0.385***	0.060	-0.921***	0.215			-0.626**	0.234
Upper secondary	-0.332***	0.049			-0.255***	0.051	-0.587***	0.172			-0.416*	0.181
Vocational college (reference)												
University	0.193**	0.066			0.157*	0.068	0.089	0.212			-0.021	0.220
Communicative educational skills	0.184***	0.037			0.145***	0.038	0.251*	0.125			0.201	0.132
Social class												
Ia Higher controllers			-0.082	0.064	-0.117~	0.063			-0.099	0.212	-0.084	0.215
Ib Higher soc/cultural spec.			0.497***	0.129	0.217~	0.131			0.738*	0.374	0.482	0.390
IIa Lower controllers (ref.)												
IIb Lower soc/cultural spec.			0.246***	0.065	0.041	0.067			0.192	0.204	-0.086	0.215
III Routine non-manual			-0.280***	0.055	-0.132*	0.055			-0.574**	0.196	-0.306	0.205
IV Self-employed			-0.500***	0.091	-0.319***	0.090			-1.154*	0.532	-0.833	0.537
V & VI Skilled manual			-0.542***	0.064	-0.299***	0.065			-1.25***	0.327	-0.874**	0.339
VII Unskilled manual			-0.556***	0.058	-0.289***	0.061			-1.25***	0.253	-0.766**	0.274
Adjusted R ² / Nagelkerke's R ²	0.224		0.196		0.234		0.070		0.065		0.081	

Notes

^aSource: Family Surveys of the Dutch Population, 1992/93 and 1998 (N = 2,974), ordinary least squares regression.

^bSource: Family Surveys of the Dutch Population, 1998 and 2000 (N = 3,010), logistic regression.

~p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001 (two-tailed).

one-tailed). The higher social/cultural specialists are relatively likely to join socially responsible organizations (model 2), but this effect disappears when we control for education (model 3). In fact, most class differences disappear in model 3. Thus, it is education that shapes the view that society has a responsibility for social problems, like the works of Gabennesch (1972) and Guimond, Begin and Palmer (1989) suggested.

Economic issues

In Table III our multivariate analyses on economic issues are displayed. People's attitude scale towards the income distribution is hardly affected by educational level, and modestly by communicative educational skills (model 1). In model 3, also this effect disappears, suggesting that education is not the most important variable here. Instead, social class has a substantial effect on people's attitude towards the income distribution in the Netherlands, which is more or less constant with our without controls for education (models 2 and 3). The largest social class differences are found within the middle class, with strongly egalitarian attitudes among the social/cultural specialists. Furthermore, the self-employed stand out as particularly conservative, whereas the manual working classes tend to be more progressive. This supports claims that the working class is more progressive with regard to economic issues, but more conservative with regard to cultural issues (De Witte 1999; Lipset 1981).

Our results could be interpreted as indicating that the impact of education runs indirectly through social class; people who were trained in fields of study that address many social skills develop a tolerant attitude and maintain their attitude once they are employed in one of the two classes of social and cultural specialists. This implies that also economic liberalism is socialized in education, but that people need to be employed in classes that benefit from strong governments and income redistribution in order to maintain their economically liberal attitude. However, the general claim for the effect of education on values is that it is *lasting* (Hyman and Wright 1979). Given the fact that we did not find that the direct effect of education was stronger among members of the old middle class, which it should be if the effect of education were stable across the life course (see note 10), we may conclude that the observed effect of educational communicative resources in model 1 is a non-causal correlation.¹²

When we look at voting intention for a left-wing political party (Table III) we see that the effect of educational level is modest. People with only primary education vote for left-wing parties relatively often, but other educational level differences are small and non-significant. Field of study, measured by communicative educational skills, does have a strong impact on voting left-wing, which is only modestly explained by social class position (model 3).

TABLE III: *Regression coefficients of economic issues on selected independent variables*

Dependent variable	Income distribution attitude ^a						Voting for a left-wing party ^b					
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	0.047	0.159	0.145~	0.080	0.126	0.166	-1.90***	0.208	-0.969***	0.109	-1.72***	0.218
Male	-0.126**	0.042	-0.103*	0.045	-0.099*	0.046	0.001	0.073	0.057	0.079	-0.016	0.082
Year of birth	-0.052**	0.018	-0.060***	0.017	-0.059***	0.018	0.197***	0.033	0.164***	0.031	0.193***	0.033
Educational level												
Primary	0.082	0.112			-0.031	0.116	0.936***	0.196			0.677***	0.205
Lower secondary	-0.082	0.068			-0.094	0.073	0.132	0.117			0.040	0.129
Upper secondary	-0.134*	0.062			-0.111~	0.065	-0.139	0.102			-0.148	0.108
Vocational college (reference)												
University	-0.118	0.084			-0.066	0.087	-0.060	0.135			-0.004	0.141
Communicative educational skills	0.105*	0.045			0.031	0.047	0.397***	0.077			0.309***	0.081
Social class												
Ia Higher controllers			-0.093	0.075	-0.093	0.077			-0.385**	0.131	-0.362**	0.133
Ib Higher soc/cultural spec.			0.505**	0.196	0.486*	0.201			0.492~	0.269	0.351	0.279
IIa Lower controllers (ref.)												
IIb Lower soc/cultural spec.			0.436***	0.079	0.383***	0.084			0.431***	0.131	0.261~	0.139
III Routine non-manual			0.052	0.066	0.079	0.068			-0.165	0.113	-0.110	0.117
IV Self-employed			-0.261*	0.111	-0.229*	0.113			-0.690**	0.224	-0.629**	0.228
V & VI Skilled manual			0.177*	0.077	0.214**	0.081			0.165	0.134	0.237~	0.142
VII Unskilled manual			0.123~	0.067	0.152*	0.072			0.323**	0.120	0.320*	0.130
Adjusted R ² / Nagelkerke's R ²	0.013		0.031		0.031		0.071		0.074		0.094	

Notes

^aSource: Family Surveys of the Dutch Population, 1992/93 and 2000 (N = 2,536), ordinary least squares regression.

^bSource: Family Surveys of the Dutch Population, 1992/93, 1998 and 2000 (N = 4,260), multinomial logistic regression. Only contrasts between left-wing voting versus voting for other party are displayed; parameter estimates for third category 'don't know / would not vote' not displayed in this table, but controlled for in multinomial logistic regression.

~p < 0.10, *p < 0.05, **p < 0.01, ***p < 0.001 (two-tailed).

Social class itself has a substantial influence on voting intention, with relatively low likelihoods of voting left-wing of the higher and lower controllers, and the self-employed. Part of the class differences *within* the middle classes are attributable to education, in particular communicative educational skills, in that the lower social/cultural specialists only slightly differ from the lower controllers in voting intention in model 3 ($0.05 < p < 0.10$ two-tailed). As this is the class that is most strongly trained in the interaction with other individuals, e.g. as a teacher or higher-level nurse, the addition of communicative skills to the model makes the contribution of new class theory to the understanding of political preferences modest. It must be noted, however, that the difference between the two higher service classes (Ia and Ib) remains intact.¹³

The source of socio-political orientations: education or social class?

To summarize these findings, and to come up with some general remarks on our hypotheses concerning the importance of education and social class in the formation of political orientations, we employ a *relative contribution ratio* of the contribution to the variance in our four dependent variables of education set off against social class. The ratio ω , developed by Silber, Rosenbaum and Ross (1995), rates the extent to which educational variables give additional explanatory power to a model containing social class, compared to what social class contributes to a model with educational variables. Because this ratio starts from the full model containing both education and social class, it is well-suited to deal with the fact that education and social class are strongly correlated. The ratio is equal to 1 if both groups of variables have the same contribution to the variance in the dependent variable, $0 < \omega < 1$ if social class has a larger contribution, and $\omega > 1$ if education contributes more to the variance in the dependent variable.¹⁴

Table IV shows that, with regard to gender role attitudes, the relative contribution ratio is significantly larger than 1, indicating a larger contribution of education to a model containing social class than vice versa ($\omega = 3.75$). With regard to income distribution attitudes we see that social class contributes significantly more than education ($\omega = 0.11$). Voting left-wing is better explained by adding social class to a model containing education, than by adding education to a model containing social class ($\omega = 0.61$), although the difference is not significant. Our insight in the social differentiation of membership of socially responsible organizations is slightly, but non-significantly, more improved by adding education to a model containing social class than by adding social class to education ($\omega = 1.39$). In general, the ratios support what was suggested above; education is more important with regard to cultural issues, whereas class has a bigger direct impact on outcomes that more directly relate to economic liberal opinions defending a strong government and income redistribution policies.

TABLE IV: *Relative contribution ratios of two groups of variables to the variance in political orientations: social class and education^a*

	Gender role attitude	Membership of socially responsible organizations	Income distribution attitude	Voting left-wing
ω	3.75**	1.39	0.11*	0.61

Notes

^a Values larger than 1 indicate an advantage for education, between 0 en 1 for social class. 1 indicates equal contributions of education and social class.

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

Conclusions and discussion

This paper examined the question to what extent socio-political orientations are caused by particular educational experiences and social class interests. Four types of outcomes are studied: gender role attitude, membership of socially responsible organizations, income distribution attitude, and intention to vote for a left-wing political party at national elections. Furthermore, to analyse social differentiation of political outcomes in post-industrial society, we incorporated measures for the two concepts that reveal important differences in such societies. A class schema is proposed that distinguishes the 'old' middle class from a new middle class of social and cultural specialists. However, Brint (1984) argued that the difference between the old and new middle classes may foremost be a difference with regard to education; the new middle class is generally characterized by a high educational level, and, as we argue, a strong association with certain fields of study. Particularly fields of study addressing social skills lead to the professions that make up the new middle class of teachers, high level nurses and social workers. As these fields are also related to tolerant attitudes (Crotty 1967; Guimond, Begin and Palmer 1989), it seems worthwhile to examine whether it is useful to consider the new middle class as a true separate class in the light of employment relations, or just a group within the middle class that differs in its educational past.

Our results show that education mainly shapes the development of culturally tolerant outcomes (gender role attitude and membership of socially responsible organizations) and these are less strongly affected by class position. This confirms our hypothesis on the strength of the education effect (hypothesis 1). Furthermore, people of higher educational levels and people trained in fields of study that extensively address social skills are more egalitarian with regard to gender roles and are more often member of socially responsible organizations. This supports hypothesis 2 on the direction of the education effect derived from the socialization theory, which predicts that education socializes political attitudes (Phelan et al. 1995) and that, once formed, attitudes are fairly stable across the life course (Inglehart 1990). The fact that social class has less of an impact can be explained by the lack of class-based

interests served by subscribing to one point of view or another on cultural matters. On the other hand, when we look at more economically oriented topics, we see that the class-based interests do the job rather than education, and that the distinction between old and new middle classes is useful to understand the role of employment relations in the formation of such interests.¹⁵ This confirms hypothesis 3, the strength-of-class-effect hypothesis. The new middle class of social and cultural specialists is interested in a strong government and a redistributive income policy, and indeed its socio-political orientation points in that direction. This supports hypothesis 4 about the sign of the class effects.

Our findings lead to two more general conclusions. First, with regard to education effects we found clear support for the fact that education socializes individuals in their political orientation. Because we found substantial differences among fields of study, either directly or indirectly through social class, limited support is found for the cognitive model of attitude formation, but more for the socialization model. The cognitive model is based on the cognitive development and rational thinking stimulated in education, which seems indifferent across fields of study within the same educational level. Moreover, if field differences were to be expected from the cognitive model, more tolerant views would be developed in strongly 'rationalized' fields of study like natural sciences. These types of study score particularly low on communicative competencies, the mechanism predicting high levels of tolerance among people educated in socially-oriented study programmes. The socialization model does predict field differences that correspond to this mechanism. Our ranking of fields of study on the attention devoted to communicative competencies clearly points to the fact that social skills make people aware of other people's standpoints, and enhance the development of tolerant attitudes and behaviour.

The second more general conclusion concerns the relevance of social class, and particularly of the new distinction in old and new factions of the middle class. Given the results of this paper it seems valuable to discern the new middle class of social and cultural specialists from the older faction of technocrats and managers, at least in order to understand the social differentiation of political orientations on economic matters. As the concept of social class that we use is based on the employment relations that people have (Goldthorpe 2000), the differential relation to the government between the two middle-class groups must be acknowledged. So, although Brint (1984) denigrated the 'class' of social and cultural workers as being an occupation-based segment of a broader class grouping because neither a 'common resource on the labor market', nor a 'common relationship to the means of economic production' is held, we do believe the employment relations and conditions differ substantially between the new middle class of social and cultural specialists on the one hand and older factions on the other. The specific

employment relations of the social and cultural specialists make them to have a strong incentive to vote for left-wing political parties, which generally support strong governments, and subscribe to more equality-based norms regarding the income distribution. Thus, the new faction of the service class is not exactly ‘an essentially conservative element within modern societies’ as Goldthorpe describes the (whole) service class (1982). However, also with regard to economic issues and voting, differences within the middle classes are seriously affected by differences in educational level and field, suggesting that future contributions to new class theory should incorporate both educational characteristics in the analysis. Proponents of new class theory that argue that the new middle class differs from the old middle class in a broad range of topics including economic and cultural issues (e.g. Lamont 1987) may overestimate the value of new-class distinctions as a tool to understand the social differentiation of political orientations; mainly with regard to economic issues the distinctions are valuable.

To what extent can our findings on the Netherlands be generalized to other countries? As mentioned in the introduction, one advantage of studying the Netherlands is that we can test hypotheses on the impact of field of study on political orientation for people of various educational attainments. In many other countries including the USA, such an analysis is restricted to the university elite (e.g. Guimond, Begin and Palmer 1989). But our confrontation of the arguments put forward by the sociology of education and new class theory can be made for all post-industrial societies with strong educational expansion and a rise of the new middle class. Educational expansion has made field of study more relevant for the understanding of political preferences, and the political preferences of the new middle class (who are expectedly often educated in ‘social’ fields of study in other countries as well) should always be put in the context of these educational developments.

(Date accepted: February 2004)

Notes

1. Direct correspondence to Dr. H.G. van de Werfhorst, Department of Sociology and Anthropology, University of Amsterdam, Oudezijds Achterburgwal 185, 1012 DK AMSTERDAM, the Netherlands, Research for this article was made possible through a Prize Research Fellowship from 2000–2002 of the first author at Nuffield College, Oxford. Earlier versions of this paper have been presented to the 2001 meeting of the World Association for Public Opinion

Research in Rome, the Dutch Social Scientific Study Days 2002 in Amsterdam, and the Department of Sociology seminar of the University of Oxford. We thank participants of those meetings for their comments. We gratefully acknowledge further comments made by Robert Andersen, David Cox, and John Goldthorpe in discussions on the paper. Special thanks go to David Firth for programming the RELIMP package in *R* to compute the relative contribution ratios

for class and education effects (available at www.r-project.org). All interpretations and remaining errors are the authors' responsibility.

2. Of course the utility derived from social skills aimed firstly at enlarging one's own well-being could later be applied to increase other people's utility. However, the primary focus of commercially oriented social skills is to increase one's own well-being.

3. A different view on the impact of education states that education indicates attachment to cultural capital, which enhances progressive standpoints with regard to cultural issues (Houtman 2001). However, Houtman's association to cultural capital is a bit vague, as is Bourdieu's conception of it (Bourdieu 1984). Cultural capital, in these terms, enhances outcomes of a very diverse kind such as cultural participation (e.g. theatre visits) as well as socio-political values. It has been argued that it would be better to separate cultural resources obtained in education from social-communicative resources obtained in education in order to understand cultural participation as well as attitudes (Van de Werfhorst 2001; Van de Werfhorst and Kraaykamp 2001). Such a refinement of Bourdieu's concept of cultural capital shows that attitudes are hardly affected by education's cultural resources, but more strongly by social-communicative resources.

4. Obviously in making a decision on how to vote people use more than just economic arguments, so in part it could also be seen as a cultural variable. However, given the strong attachment of voting to social class positions in existing political sociological theory, voting behaviour seems more an economic than a cultural issue. Furthermore, in so far as voting is a cultural issue, choices tend to be made along a libertarian-authoritarian continuum rather than the left-right continuum (Heath, Evans and Martin 1993; Middendorp 1991).

5. The Family Surveys of the Dutch Population are collected by the Department of Sociology of the University of Nijmegen, the

Netherlands (Ultee and Ganzeboom 1993; De Graaf et al. 1998, 2000).

6. Obviously, any scale should not only be reliable, but also valid. We validated our scale by interviewing 15 experts on the Dutch educational system (study advisors, educational scientists, and sociologists) about the skills obtained in the various fields of study. Their judgments on the extent fields of study supply the same four skills to students resembled the values obtained from respondents ($r = 0.88$).

7. We also examined whether the amount of communicative competencies of fields of study differed across educational levels, and across birth cohorts. This analysis showed that some fields are less socially oriented at secondary level than at tertiary level. No significant interaction effects were found between field of study and birth cohort.

8. Typical occupations belonging to the higher controllers are accountant, engineer, general manager, sales manager, higher technician. Typical higher social/cultural specialists are occupations such as educational advisor, social scientist, examiner and physician. Lower controllers comprise such occupations as laboratory assistant, system analyst, office supervisor and technical drawer. The class of lower social/cultural specialists are formed by occupations such as teacher, librarian, social science assistant, nurse, and musician.

9. As the results of this analysis are largely the same as we discuss below, no further attention is devoted to it. *Parental social class* is included (a classification like the one for respondents but without new class distinctions, resulting in six instead of eight categories). In addition, *parental political party preference* is included. Using a measure of the International Social Justice Project (ISJP 1993), each political party is placed on a right-to-left scale of one to five. Parental political party preference is measured by taking the average score of the political party that both parents would vote for at national elections.

10. However, still the higher social/cultural specialists are more tolerant than the

higher controllers ($B = 0.217 - 0.117 = 0.334$, $p < 0.05$, not shown).

11. To the extent that the effect of communicative educational resources runs indirectly through the new middle class, it can be expected that the (direct) effect of communicative educational resources is weaker among people employed in the new middle classes than among members of the old middle class. With regard to gender role attitudes we found some support for this argument, with a negative interaction parameter with $p = 0.092$. With regard to the other dependent variables the interaction parameter was not significant. This indicates that our additive model specification is appropriate.

12. However, we have to be cautious with the results on this dependent variable, as the percentage explained variance is low (3.1 per cent in the full model).

13. The results with regard to voting intention are somewhat different from the results controlling for parental characteristics (results available from the authors upon request). Particularly differences between primary education and higher levels of schooling, and between working classes and higher social classes, are smaller once we hold constant for parental class and parental voting intention. However, the coefficients of the central variables communicative educational skills and new versus old middle-class differences remain largely unchanged, which justifies our discussion of the models without parental characteristics here.

14. The relative contribution ratio is very similar to a ratio of two 'sheaf coefficients' as proposed by Heise (1972). The statistical

significance test of the relative contribution ratio is possible through use of the delta method explained in Silber, Rosenbaum and Ross (1995). The relative contribution ratio is computed using the relimp package in statistical software environment *R*, available at www.r-project.org.

15. There are, however, indications that the progressive attitude of the social/cultural specialists is not *only* caused by class-based economic interests. Although the income position of the social/cultural specialists *relative to the controllers* is low, their income level is presumably still higher than that of working classes. However, the specialists' attitudes are even more in favour of redistribution than those of the working classes (though an analysis not presented here showed that this difference was not significant), suggesting that, at least partly, their attitude is also ideologically formed. However, if we include postmaterialist values as an ideological orientation that might intermediate class position and liberalism, we found that class differences were largely the same as reported in Table III. Another argument against the ideology hypothesis, and more in favour of the economic interests hypothesis, is probably the fact that individuals have a more accurate judgment of objects that are close to one's position than of objects further away, in the psychological and biological literature known as Weber's law. This suggests that the social/cultural specialists have a better idea of their relative income position compared to controllers than that compared to working classes.

Bibliography

Bourdieu, P. 1984 *Distinction. A Social Critique of the Judgement of Taste*, London: Routledge & Kegan Paul.

Brint, S. 1984 'New Class' and Cumulative Trend Explanations of the Liberal Political Attitudes of Professionals', *American Journal of Sociology* 90(1): 30-71.

Bruce-Biggs, B. 1979 *The New Class?*, New Brunswick, NJ: Transaction.

Butler, T. and Savage, M. 1995 *Social Change and the Middle Classes*, London: UCL Press.

Clark, T.N. and Lipset, S.M. (eds) 2001 *The Breakdown of Class Politics. A Debate*

- on *Post-Industrial Stratification*, Baltimore, Maryland: John Hopkins University Press.
- Crotty, W.J.** 1967 'Democratic Consensual Norms and the College Student', *Sociology of Education* 40: 200–18.
- De Graaf, N.D., De Graaf, P.M., Kraaykamp, G. and Ultee, W.C.** 1998 *Family Survey of the Dutch Population 1998 [Datafile]*, Nijmegen: Department of Sociology, University of Nijmegen.
- De Graaf, N.D., De Graaf, P.M., Kraaykamp, G. and Ultee, W.C.** 2000 *Family Survey of the Dutch Population 2000 [Datafile]*, Nijmegen: Department of Sociology, University of Nijmegen.
- De Graaf, N.D. and Steijn, B.** 1997 'De 'Service' Klasse in Nederland: Een Voorstel tot Aanpassing van de EGP-Klassenindeling', *Tijdschrift voor Sociologie* 18(1–2): 131–54.
- De Witte, H.** 1999 'On the Occupational Roots of Conservatism: Expanding Middendorp's Analysis with the Concepts of Rotter and Kohn', in H. De Witte and P. Scheepers (eds) *Ideology in the Low Countries. Trends, Models and Lacunae*, Assen, The Netherlands: Van Gorcum.
- Dunleavy, P. and Huberts, C.T.** 1985 *British Democracy at the Crossroads: Voting and Party Competition in the 1980s*, London/Boston: Allen and Unwin.
- Emler, N. and Frazer, E.** 1999 'Politics: The Education Effect', *Oxford Review of Education* 25(1/2): 251–73.
- Erikson, R. and Goldthorpe, J.H.** 1992 *The Constant Flux: A Study of Class Mobility in Industrial Societies*, Oxford: Clarendon Press.
- Esping-Andersen, G.** (ed.) 1993 *Changing Classes. Stratification and Mobility in Post-Industrial Societies*, London: Sage.
- Esping-Andersen, G.** 1999 *Social Foundations of Postindustrial Economies*, Oxford: Oxford University Press.
- Evans, G.** (ed.) 1999 *The End of Class Politics? Class Voting in Comparative Context*, Oxford: Oxford University Press.
- Gabennesch, H.** 1972 'Authoritarianism as World View', *American Journal of Sociology* 77(5): 857–75.
- Ganzeboom, H.B.G., Luijckx, R. and Treiman, D.J.** 1989 'Intergenerational Class Mobility in Comparative Perspective', *Research in Social Stratification and Mobility* 9: 3–79.
- Goldthorpe, J.H.** 1982 'On the Service Class: Its Formation and Future', in A.G.G. MacKenzie (ed.) *Social Class and the Division of Labour: Essays in Honour of Ilya Neustadt*, Cambridge: Cambridge University Press.
- Goldthorpe, J.H.** 2000 *On Sociology: Numbers, Narratives, and the Integration of Research and Theory*, Oxford: Oxford University Press.
- Guimond, S., Begin, G. and Palmer, D.L.** 1989 'Education and Causal Attributions: The Development of "Person-Blame" and "System-Blame" Ideology', *Social Psychology Quarterly* 52(2): 126–40.
- Güveli, A., Need, A. and De Graaf, N.D.** 2003 'The rise of 'new social classes' within the service class in the Netherlands: Political orientation of the 'new social classes' between 1970–2000', University of Nijmegen.
- Haller, M., König, W., Krause, P. and Kurz, K.** 1985 'Patterns of Career Mobility and Structural Positions in Advanced Capitalist Societies: A Comparison of Men in Austria, France, and the United States', *American Sociological Review* 50(5): 579–603.
- Heath, A., Evans, G. and Martin, J.** 1993 'The Measurement of Core Beliefs and Values: The Development of Balanced Socialist/Laissez Faire and Libertarian/Authoritarian Scales', *British Journal of Political Science* 24: 115–58.
- Heise, D.R.** 1972 'Employing nominal variables, induced variables, and block variables in path analysis', *Sociological Methods & Research* 1: 147–73.
- Holland, J.L.** 1985 *Making Vocational Choices: A Theory of Vocational Personalities and Work Environments*, Cliffs, NJ: Prentice-Hall.
- Hout, M., Brooks, C. and Manza, J.** 1995 'The Democratic Class Struggle in the United States, 1948–1992', *American Sociological Review* 60(December): 805–28.

- Houtman, D.** 2001 'Class, Culture, and Conservatism: Reassessing Education as a Variable in Political Sociology', in T.N. Clark and S.M. Lipset (eds) *The Breakdown of Class Politics. A Debate on Post-Industrial Stratification*, Baltimore, Maryland: John Hopkins University Press.
- Hyman, H.H. and Wright, C.R.** 1979 *Education's Lasting Influence on Values*, Chicago: University of Chicago Press.
- Inglehart, R.** 1990 *Culture Shift in Advanced Industrial Society*, Princeton: Princeton University Press.
- Ishida, H., Müller, W. and Ridge, J.M.** 1995 'Class Origin, Class Destination, and Education: A Cross-National Study of Ten Industrial Nations', *American Journal of Sociology* 101(1): 145–93.
- ISJP** 1993 'International Social Justice Project: Codebook and Documentation', Ann Arbor: Institute for Social Research, University of Michigan.
- Kriesi, H.** 1989 'New Social Movements and the New Class in the Netherlands', *American Journal of Sociology* 94(5): 1078–116.
- Lamont, M.** 1987 'Cultural Capital and the Liberal Political Attitudes of Professionals: Comment on Brint', *American Journal of Sociology* 92(6): 1501–6.
- Lipset, S.M.** 1981 *Political Man. The Social Basis of Politics*, 2nd Edition, Baltimore, Md.: John Hopkins Press.
- Manza, J. and Brooks, C.** 1999 *Social Cleavages and Political Change. Voter Alignments and U.S. Party Coalitions*, New York: Oxford University Press.
- McClosky, H. and Brill, A.** 1983 *Dimensions of Tolerance. What Americans Believe About Civil Liberties*, New York: Russell Sage Foundation.
- Middendorp, C.P.** 1978 *Progressiveness and Conservatism. The Fundamental Dimensions of Ideological Controversy and their Relationship to Social Class*, The Hague/Paris/New York: Mouton.
- Middendorp, C.P.** 1991 *Ideology in Dutch Politics. The Democratic System Reconsidered 1970–1985*, Assen: Van Gorcum.
- Nie, N.H., Junn, J. and Stehlik-Barry, K.** 1996 *Education and Democratic Citizenship in America*, Chicago: University of Chicago Press.
- Nieuwbeerta, P. and De Graaf, N.D.** 1999 'Traditional Class Voting in Twenty Postwar Societies', in G. Evans (ed.) *The End of Class Politics? Class Voting in Comparative Context*, Oxford: Oxford University Press.
- Nunn, C.Z., Crockett, H.J. and Williams, J.A.** 1978 *Tolerance for Non-Conformity*, San Francisco: Jossey-Bass.
- Pascarella, E.T. and Terenzini, P.T.** 1991 *How College Affects Students. Findings and Insights from Twenty Years of Research*, San Francisco: Jossey-Bass.
- Phelan, J., Link, B.G., Stueve, A. and Moore, R.E.** 1995 'Education, Social Liberalism, and Economic Conservatism: Attitudes Toward Homeless People', *American Sociological Review* 60(February): 126–40.
- Savage, M.** 1991 'Making Sense of Middle-Class Politics: A Secondary Analysis of the 1987 British General Election Survey', *Sociological Review* 39: 26–54.
- Scheepers, P., Ester, P. and De Witte, H.** 1999 'Understanding Ideological Trends in Dutch Society: Middendorp's Contributions', in H. De Witte and P. Scheepers (eds) *Ideology in the Low Countries*, Assen: Van Gorcum.
- Shavit, Y. and Müller, W.** (eds) 1998 *From School to Work. A Comparative Study of Educational Qualifications and Occupational Destinations*, Oxford: Clarendon Press.
- Silber, J.H., Rosenbaum, P.R. and Ross, R.N.** 1995 'Comparing the Contributions of Groups of Predictors: Which Outcomes Vary with Hospital Rather Than Patient Characteristics?' *Journal of the American Statistical Association* 90: 7–18.
- Stephan, W.G. and Stephan, C.W.** 1984 'The Role of Ignorance in Intergroup Relations', in N. Miller and M.B. Brewer (eds) *Groups in Contact: The Psychology of Desegregation*, Orlando, Florida: Academic Press.
- Ultee, W.C. and Ganzeboom, H.B.G.** 1993 *Family Survey of the Dutch Population 1992–93 [Datafile]*, Nijmegen: Department of Sociology, University of Nijmegen.

Van de Werfhorst, H.G. 2001 *Field of Study and Social Inequality: Four Types of Educational Resources in the Process of Stratification in the Netherlands*, Nijmegen: ICS Dissertation.

Van de Werfhorst, H.G. and Kraaykamp, G. 2001 'Four Field-related Educational Resources and Their Impact on Labor, Con-

sumption, and Sociopolitical Orientation', *Sociology of Education* 74(4): 296–317.

Weil, F.D. 1985 'The Variable Effects of Education on Liberal Attitudes: A Comparative-Historical Analysis of Anti-Semitism Using Public Opinion Survey Data', *American Sociological Review* 50(August): 458–74.