JON LAUGLO[1]

FAMILY STRUCTURE AS SOCIAL CAPITAL FOR EDUCATION?[2]

A b s t r a c t Does family structure influence academic performance of adolescents? Using family-based 'social capital' as a heuristic device, this study analyzes data from Norwegian official registers on a cohort that in 2004 completed the lower-secondary stage of compulsory basic education. Both before and after controls for parental education attainment, the findings show that adolescents growing up in traditional nuclear families (with both their parents who are married to each other) on average perform better than those growing up with cohabiting parents. The contrast is stronger with other family types (single parent, or one of their parents and a step-parent). These findings fit Coleman's argument about family-based 'social capital', but other explanations are also possible.

Introduction

The concept of "social capital" opens for diverse contents for different purposes. Portes (1998) concludes that the concept is a useful heuristic concept. Such heuristic devices may not suffice for final interpretations of analysis. But they can direct attention to relationships which otherwise tend to be ignored. That is its intended usage in this analysis of Norwegian registry data on young people. The concept tends to be quite broadly defined and usually stresses reciprocal social relations enabling actors to work together for common goals (Field, 2003), but usage varies considerably.

The most influential scholars who launched the concept of social capital, used it for quite diverse purposes, ranging from meso- and macro-level preconditions for political democracy in Italy and the U.S. (Putnam 1995, 2000), to exchange of favours among Kabylian peasants, or benefits from socially exclusive networks for career access in France (Bourdieu, 1984 [1979]; Bourdieu & Passeron, 1970), to family- and community-based social regulation for individual-level educational outcomes in the United States (Coleman 1988, 1990). Coleman's usage has influenced research on educational outcomes (Field, 2003) and is of particular interest to the present study. His functional definition of social capital, however, is

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[1] University of Oslo

[2] It is a great pleasure to have the opportunity to submit a paper to this special issue honouring the internationally distinguished Hungarian educator and sociologist Professor Tamas Kozma with whom I had the good fortune to personally get acquainted, by sheer chance once, for several very stimulating hours, on an airliner.

indeed 'heuristic' because it is so broad that it could refer to *any* social relations, regardless of their strength and contents transmitted, which are helpful for social action in achieving goals valued by an individual or corporate actor:

> *"Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structure, and they facilitate certain actions of actors – whether persons or corporate actors – within the structure"* (Coleman, 1988, p. 98).

In his practice Coleman (1988, 1990) focused on quite specific phenomena: positive effects of relatively strong social regulation exerted by adults, for young people's socialization during transition to adulthood – especially their extent of success in formal education. The context for his theorizing was modern US society in which Coleman perceived social regulation by adults to be problematically weak for adolescents. Hence his social-capital usage came to focus on *cohesive* families, on *strong local communities* to which youth and parents both belong, and on *close relations* among families, schools and community. His *definition,* however, also opens for distinctly "weak" ties in relatively impersonal but far flung networks (Granovetter, 1973).

Coleman's theorizing and findings were a starting point for the present study, but his broad concept of 'social capital' begs specification of type of actor, goal and context. The question posed is whether adolescents benefit educationally from growing up in families in Norway with parents living together in a strongly institutionalized relationship (marriage). The analysis summarizes key findings from previous publications in Norwegian which also included more comprehensive reviews of international research literature (Lauglo, 2008, 2009). I have in this short article prioritized citations to kindred empirical studies which previously have been published in Norwegian, and which therefore may not usually be known to colleagues outside the Scandinavian countries.

Sample and data

The analysis uses data on a cohort of young people in Norway who in 2004/05 were in their first year of post-compulsory upper-secondary education (ages 16-17). The data derive from administrative registers and were anonymized and made available from Statistics Norway. The measure of educational performance is a Grade Point Average (GPA) based on final grades from the (compulsory) lower- secondary schooling *just previously completed* by these adolescents. Since nearly all students

(95% +) enter upper-secondary schooling at 16+, the present data approximate a whole age cohort.

The number of observations with valid relevant data is so large that it becomes possible to the use descriptive statistics to show mean achievement scores, also for subsamples that include quite small proportions of the cohort, and to use descriptive rather than inferential statistics also when controlling for effects of parental level of education.

The dependent variable is the GPA calculated from final grades in all core subjects in the lower-secondary stage. Grade point scores are used in allocation to individual upper-secondary schools when applications exceed the number of places (Students have an entitlement to a place). The marking is from 1 to 6 (the highest mark). The national distribution of GPA has a standard deviation of 0.8 units on that scale.

The key independent variable is "family structure" as categorized by the adult(s) in the adolescent's home. *Married parents*: refer to mother and father are married to each other; *Cohabiting parents* are: The parents are living together without being married. Other categories are: *Mother and stepfather; Father and stepmother, Single mother,* and *Single father*.

Admittedly, the dependent variable and the key independent variable are crude measures, for education has wider aims and concerns than what is measured by marks in school subjects; and "family structure" does not directly measure the closeness of social relations between the adolescent and his/her adult family members and the contents transmitted by those relations. It could therefore be that such relationships as are found between family structure and educational outcome would understate the strength of association which would arise if more comprehensive measures were obtained of desirable learning outcomes and of family relations which affect such outcomes.

Analysis

Coleman's (1988) argument about the advantages of the traditionally legitimated nuclear family (what he calls "intact families") as an arena for socialization implies that the more closely their family structure accords with that of the traditional nuclear family, the better adolescents would on average, *inter alia,* perform in school.

Table 1 shows distributional statistics on the independent variable and mean scores (to the right) which show the bivariate relationship with student's educational achievement. On the left we see that 58.7% live with their parents who are married

to each other. Thus, the traditionally institutionalized nuclear family is prevalent, but other family types together account for about 40% of the cases. Since these are data for very nearly an entire national cohort, there are enough observations for descriptive statistics on rarely occurring family compositions. One such type is long-term "cohabiting parents". About 1 out of 20 adolescents have such families.

Table 1. Students in first year of post-compulsory education. Distribution by family structure. Mean grade-point average from lower secondary education by family structure.

Family type. The student lives with:	The whole cohort		Students with valid data on grade-point average & family type		Mean grade-point average from lower secondary school
	N	%	N	%	
Parents married to each other	36 236	58.7	35 520	58.9	4.07
Cohabiting parents	2 806	4.5	2 755	4.6	3.88
Single mother	13 142	21.3	12 735	21.1	3.67
Single father	3 619	5.9	3 544	5.9	3.66
Mother and stepfather	4 972	8.1	4 847	8.0	3.67
Father and stepmother	967	1.6	938	1.6	3.66
Total with valid information on family composition	61 742	100.0	60 399	100.0	3.91
Missing information	9 050				
Grand total	70 792		60 339		

Standard deviation of grade-point average = 0.83. Eta2 for variance in grade-point average= 0.05

Cohabitation between adults is usually of short duration. It may lead to marriage especially when a child is born, but cohabitation is more frequently is dissolved before, or soon after, such a birth. In all of the nine western European countries in Kiernan's (2002, p. 25) study, cohabitation-relationships had higher probability of dissolution in the first 3-5 years after a child is born, than the probability of subsequent marriage between the parents. For cohabiting mothers under age 25 in Norway, cohabitation is also more commonly dissolved than leading to marriage with their partner. The older that cohabiting persons are, the more stable the relationship tends to be (Noack, 2002, pp. 44–45, p. 48). For the cohabiting parents of adolescents in the present sample, one can therefore assume that the relationship has been unusually stable since it has lasted until the child has reached mid-adolescence. If close and stable relations between parents matter for children's

performance in school, one might therefore expect that adolescent children from homes with cohabiting parents would perform as well as when parents are married.

Since it is quite common in Norway (about 4 out of 10 in Table 1) for adolescents to grow up in other families than the traditionally legitimated nuclear type, it is likely that risks of stigmatization of children because of parental divorce, have been greatly reduced compared to earlier generations for whom divorce was rare. Cohabitation has also become legally recognized. Since the 1990s, cohabiting partners may by registering their partnership acquire the same entitlements and duties as married couples have with regard to social-secturity benefits, pensions and taxation (Noack, 2001). Noack & Seierstad (2003, p. 2) have also analyzed survey data showing that most adults in the family-formation stage (ages 27-36) have experienced a cohabitation relationships; and that most adults in the general population think cohabitation and marriage are of equal worth, also as conditions for raising children. Thus, there are many reasons why one might expect, for the case of Norway, that children growing up in families with long-term cohabiting parents, would on average experience as good conditions for their transition to adulthood as children whose parents are married. If so, one would also expect that their children would perform as well in school, as children of married couples.

As shown to the right in Table 1, however, there is nonetheless a difference in favour of a traditionally institutionalized nuclear family. On average, the best performing adolescents are those whose parents are married to each other. Then there is a small decline in GPA to children of cohabiting parents, followed by a more substantial decline down to the various categories of in which the parents are living apart; and the differences among these latter groupings are of negligible magnitude. Thus, it is neither an 'advantage', nor any 'disadvantage' for a child's educational achievement if a parent has moved in with (or married) a partner that acts as a step parent for the adolescent.

So far these findings fit Coleman's argument about the advantage of the traditionally legitimated nuclear family. However, there has until very recently been a striking lack of policy attention to this type of variation in young people's social background, in spite of the fact that 'non-traditional' family types have become increasingly common in Norway in the most recent generations, and certain other aspects of social-cultural status have received much attention. The Eta^2 for the bivariate relationship in Table 1 shows that the positive association is hardly 'strong' since it statistically predicts only about 5% of the variance among in students' educational performance ($Eta^2 = .05$). Since 95% of the variance thus remains 'unexplained', there will of course within any of these family types be much

variation in young people's educational performance. It is noteworthy though that this modest strength of association is no weaker than some other relationships which have received much more attention by research and policy.

Also in Norway, and as will be shown in Figure 1, educational performance is positively associated with the family's socio-economic status (SES), and more strongly so than with family structure. The magnitude of this moderately strong association has been remarkably persistent in recent decades in spite of policy interventions designed to counter it. However, inequalities by gender and ethnicity (immigrant background) have also received much attention. Girls 'perform better in school'. This was also found in the present data (not shown here), and the extent of that association ($Eta^2 = 0.06$) was at much the same level as the association with family structure. In keeping with other much other research, analysis of the the present data also show that children of the ethnic Norwegian majority population on average outperform children of ethnic immigrant minorities with a background from developing countries.

Such 'immigrant parent-background' explained only 2% of variance in GPA nationally, but the effect disappeared after controls for conventional socio-economic family-status indicators (Lauglo, 2009). The question arises whether the politically ignored, but stronger, association with family structure will similarly disappear if one controls for parental level of education? Some reduction in strength of net association would be expected from such a control, for the percentage of pupils growing up with 'married parents at home', is somewhat higher when the mother has higher education (Lauglo 2008, p. 15). Tri-variate analysis is possible by means of descriptive statistics on these data. Figure 1 shows for each 'mothers-education category', the mean GPA for further sub-samples of these family structure groupings: "Married parents", "Cohabiting parents" and "Parents living apart". The latter combines groupings which in Table 1 showed negligible GPA differences.

Figure 1. Mean grade-point average from basic education. By family structure and mother's level of education
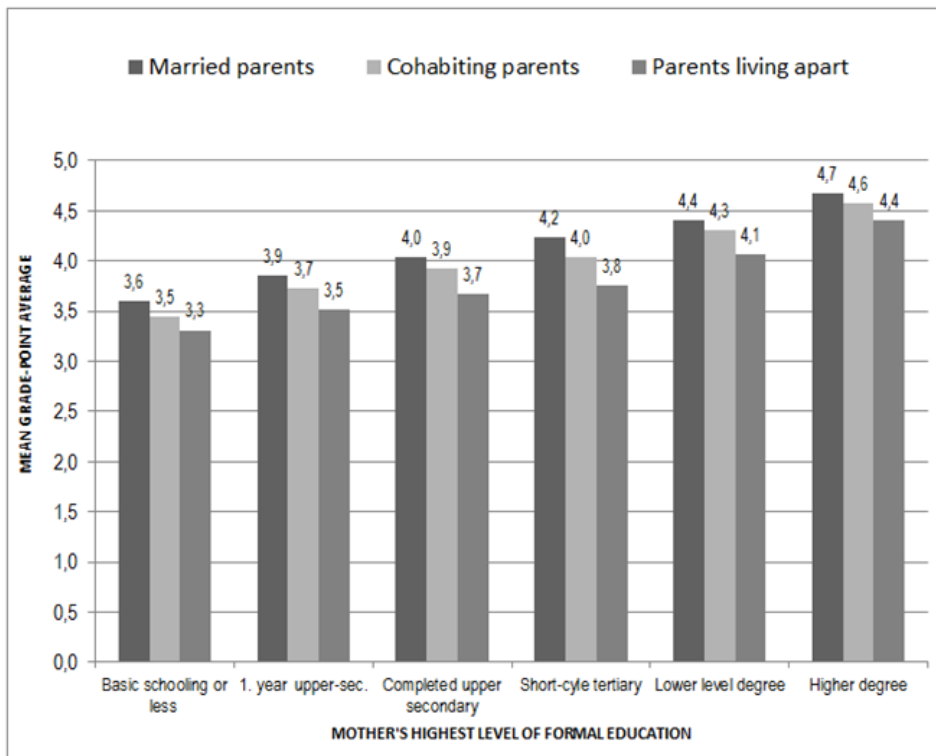
N total = 59100. n > 300 for all graphic columns, except in these combinations: n =69 for "cohabiting parents" and "mother has "short-cycle tertiary"; n= 72 for "cohabiting parents" and "mother has "MA or higher".

In all 'mother's education groupings' in Figure 1, there is consistent repetition of the directional pattern of differences by family structure. For example, among the 300+ students whose mother has a "Higher degree": Children of married parents have a mean GPA of 4.7 as compared to 4.4 for those with "Parents living apart" (a difference of about 3/8 of a standard- deviation unit on this scale). The figure also shows that the association with parental education level (here the mother's level) is stronger. For example, if the mother's has a "Higher degree" from a university-level institution, children of married parents have a mean GPA of 4.7 as compared to 3.6 when the mother has "basic schooling or less"– a difference of 1.1 GPA units (which amounts to 1.3 GPA standard-deviation units). The pattern of difference between children of married parents and children of cohabiting parents is also consistently repeated across the mother's education categories, but the actual differences range from only 0.1 to 0.2 units on the GPA scale.

Multivariate inferential statistics on these data (Lauglo, 2009, 2008) have confirmed the robustness of the pattern by family structure when GPA-estimates also were adjusted for effects of father's education, parental income (as reported for tax purposes), the pupils' gender, and whether the parents were immigrants or not. Besides, analysis on the large number of observations (n =12000+) of adolescents living with 'Single mothers', also ruled out the possibility that GPA-differences within this grouping could be due to differences in purchasing power (Lauglo, 2009, p.16).

These findings fit Coleman's argument that the traditionally institutionalized type of nuclear family on average is more conducive for desirable upbringing and education outcomes, than the 'new family types'. Other recent Norwegian findings by Opheim, Grøgaard & Næss (2010) on large-scale data also fit Coleman's argument. Wiborg and others (2011) have similarly confirmed effects of family structure on educational outcomes after control for a range of other factors. In particular, they found that children of cohabiting parents perform less well than do children of married parents (p. 88). In a panel study with large samples of young people in 6 counties in south-eastern Norway, Markussen and others (2006, p. 317–318) show that adolescents whose parents 'live apart' are less likely than others to complete upper-secondary schooling 'on time'. Their range of their control variables was unusually wide: GPA from basic education, parents' level of education and attitudes to schooling, the students' effort on homework, extent of adjustment to school, their values, ambition, and type of upper secondary schooling. Their finding parallels Coleman's (1988) US finding that it is especially *completion* of commenced courses and educational programmes (rather than 'dropping out'), which is more common among adolescents growing up in what he calls 'intact nuclear families'.

The 'robustness' of the present findings is of course no logically sufficient demonstration of causality – in this case of a genuine *effect* of "family structure". These findings *could* also be due to self-selection of parents with different personality traits to different family types, e.g., the possibility that those with personality traits conducive for being 'good parents' are also more likely than others to get married and stay married. What these Norwegian findings rule out, however, is the argument that such associations with family structure can be fully reducible to indicators of socio-economic status. A further possibility is that the relationship with family structure is due to association between such demographically measured family types and differences between these types in extent of harmonious relations

between the adults and close reciprocal relations between the adolescents and the parents.

The latter expectation was part of Coleman's social-capital theorizing about the merits of 'intact families'. However, in an attempt to test that argument on Norwegian youth survey data, it was unsurprisingly found that demographically measured 'family structure' effects were reduced by entering indicators of such intra-family social relations into the multivariate analysis of educational performance. But the effects of demographically measured family-structure did not entirely disappear (Ch. 6 by Lauglo in Heggen, Helland & Lauglo, 2013).

Thus, it may be concluded that while the association between educational performance and family structure is not reducible to effects of family income or parental level of education, there remains a need to unravel the pattern of influences at work behind this association. The concept of family-based 'Social capital' is indeed useful for directing attention to this relationship and for developing hypotheses about the more specific explanatory mechanisms at work. Thus it is indeed useful heuristically. But it does not so far appear to be an adequate explanation of the influences at work.

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