

The Growing Educational Gradient in Parental Child Care Time: Mothers and Fathers in 12 Western Countries

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The time parents devote to child care is important. Children benefit from parental interaction, notably in terms of academic achievement (Hoover-Dempsey, Battiato, Walker, Reed, DeJong and Jones 2010; Hill, Waldfogel, Brooks-Gunn and Han 2005; Bernal and Keane 2011), cognition (Tucker-Drob and Harden 2012; Lugo-Gil and Tamis-LeMonda 2008), language acquisition (Leibowitz 1977; Rowe 2008), and behavior (Laird, Pettit, Bates and Dodge 2003; Vandell, Belsky, Burchinal, Steinberg, Vandergrift and NICHD Early Child Care Research Network 2010). In recent decades, mothers and fathers have increased their time in child care in the US and Europe (Gershuny 2000; der Lippe and De Ruijter 2004; Gauthier, Smeeding and Furstenberg 2004; Mancini and Pasqua 2009; Sayer, Bianchi and Robinson 2004; Bianchi 2011). Furthermore, better educated parents—at least mothers—spend more time in child care than less educated ones (England and Srivastava 2013; Guryan, Hurst and Kearney 2008).

The positive educational gradient for parental time with children is counter to expectations. For example, better educated parents' higher earnings potential should encourage paid employment over unpaid child care. Higher incomes also permit them to outsource responsibility for offspring to nannies. That the time allocated to child care defies this sort of economic logic suggests the need to consider education not merely as human capital, but also as a pipeline for new ideas about desirable relations within couples and between parents and children. Likely, better educated parents are more aware of the benefits of parental time for child outcomes, as well as newer, time-intensive, middle-class parenting styles such as concerted cultivation (Laureau 2000). Therefore, we would expect them not only to do more child care, but also to have increased their daily minutes in child care over time.

We do not know whether the trends in the educational gradient for child care are the same for men and women. Traditionally, women have had primary responsibility for child care. Given changing cultural expectations for parenting, we might reasonably expect the established educational gradient in mothers' time with children to have widened over the decades. Although mothers' educational gradient is well established, the results for fathers are less clear cut and vary across countries (Yeung, Sandberg, Davis-Kean and Hofferth 2001; Craig and Mullan 2011; Hook and Wolfe 2011; Gimenez-Nadal and Molina 2013). The "good provider model" stressing men's breadwinning responsibilities has been challenged by the "new fatherhood model" celebrating fathers as emotionally involved caregivers (Bernard 1981; Marsiglio 1995; Duyvendak and Stavenuiter 2004); growing public support for gender egalitarianism also demands their greater involvement in children's lives (Bolzendahl and

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Meyers 2004; Voicu 2009). Whether better educated fathers spend more time with children and whether this time has increased vis a vis less educated men remains to be seen.

This article asks whether better educated mothers and fathers have increased their time with children more rapidly than their less educated counterparts. We ask whether the positive educational gradient in time spent on child care has become stronger over time, as we might expect given the tendency of new practices to take hold in higher social classes before filtering down (Rogers 1962). To test this hypothesis, this analysis draws on surveys from the Multinational Time Use Study (MTUS) for 12 Western countries between 1965 and 2010.

The article makes two contributions. First, moving beyond for single country studies, our cross-national analysis offers a firmer foundation for generalizations about the educational gradient for childcare, especially for men whose patterns have not been well established by prior literature. Second, while documenting this educational gradient across countries, we find gender differences in the trend. Mothers' educational gradient in child care widened over time. For fathers, we find a previously undocumented cross-over. Their educational gradient only emerged when well-educated fathers' time with children surpassed that of men with less schooling.

Data and sample

Data come from the Multinational Time Use Study (MTUS) files 5.52 and 5.53 (Fisher et al. 2011). A collection of cross-national time use surveys, the MTUS allows the allocation of time to be studied in a comparative fashion. Respondents were asked to keep a diary for one or more days recording all their activities in their own words. The activities were then coded and harmonized. Harmonized time use surveys involve a large number of countries and date back in time to the 1960s. Given the post-hoc harmonization, not all surveys contain the same information, but we choose surveys for a dozen countries with the highest standards of comparability on individual characteristics. We analyze surveys for 58 country-years: Australia 1974; Austria 1992; Canada 1971, 1972, 1981, 1986, 1992, 1998, 1999; Denmark 1987; France 1998, 1999; Germany 1991, 1992, 2001, 2002; Italy 1988, 1989, 2002, 2003; Netherlands 1975, 1980, 1985, 1990, 1995, 2000, 2005; Norway 1980, 1981, 1990, 2000, 2001; Spain 2002, 2003; United Kingdom 1974, 1975, 1983, 1984, 1987, 1995, 2000, 2001, 2005; USA 1965, 1966, 1975, 1976, 1985, 1995, 1998, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010.

Analysis focuses on parents, ages 18-65, living in households with at least one child under 18 years old. Dropping the 3.48% of observations with missing values on the variables of interest leaves an analytic sample of 144,229 observations. The harmonized dependent variable defines daily minutes in child care (top coded at 12 hours) to include feeding and preparing food for babies and children, washing, changing, putting to bed or getting up, unpaid babysitting, providing medical care, reading to or playing with children, helping with homework, supervising, and providing other care of children and babies.

In (preliminary) seemingly unrelated regressions for child care time simultaneously modeling housework time, the survey year (centered at the median) captures changes in

parental time allocation. An interaction between the survey year and respondent's education level tests whether there is a greater increase in child care for better educated parents. Education is measured by three categorical variables—high (above secondary education), medium (completed secondary education) and low (incomplete secondary education), the omitted reference category. An interaction between survey year and respondent's gender (mother=1, father=0) tests whether men's time devoted to child care increase less over time than women's. The three way interaction between gender, education level, and survey year ascertains whether better educated fathers' changes (increases) over time in daily child care minutes will be larger than for those for less educated fathers. Controls include respondent characteristics: age (mean centered), partnership status (not living with a partner=1; else=0), number of children younger than 18 in the household, age of the youngest child (0-4 as the omitted reference, 5-12, 13-17 years), hours of employment on the diary day top-coded at 12 (not in the labor market=0), and whether the diary day was a weekend (=1) or weekday (=0).

Findings

For each country and year, women spend more time on child care than men. Mothers' mean values range from 35 minutes per day in Denmark in 1987 to 116 in the UK in 2005. For fathers, means range from 9 in the UK in 1974 to 67 there in 2005. All things considered, the regression results show that each advancing year is associated with parents spending more minutes daily in child care (0.925, $p < 0.001$). Furthermore, the changes over time are larger for parents with medium and especially high education (beta 0.245, $p < 0.001$ and beta 0.794, $p < 0.001$, respectively). Fathers see increased time spent in child care (beta 0.534, $p < 0.001$) and housework (beta 0.994, $p < 0.001$), but according to the gender-year interaction term ($p < 0.05$), mothers see a greater increase in child care time (0.091) than fathers do. Figure 1 plots the predicted values of daily minutes of child care over time for mothers and fathers with low, medium and high education adjusted for all control variables. With every passing year, all mothers, but particularly highly educated ones, spend more minutes on child care. As for the predicted values for fathers, each additional year is associated with more time devoted to child care (0.423, $p < 0.001$) and housework (0.645, $p < 0.001$). The slopes indicate that highly educated fathers have increased their time inputs to child care to a larger extent than less educated ones. In fact, there is a crossover; the most educated fathers, who once did the least child care, now do the most.

Conclusion

These results point to a troubling new development in class disadvantage among children. For both men and women, there is an increasing class gradient to time spent in child care—with better educated parents lavishing more time on their children than less educated ones do. To the extent that children benefit from parental time, children with poorly educated parents—who are already disadvantaged—are getting comparatively less time from parents than other children, and the gap is growing.

Figure 1 Predicted daily child care minutes, with 95% confidence intervals, by survey year for mothers and fathers by education. Adjusted for age, partnership status, number of children, age of youngest child in the household, day of the week, hours worked that day and country of residence: 12 countries, 1960-2012.

