From rich, large families to childless success.

Why and to which extent the status-fertility relation reversed

Extended Abstract

Vegard Skirbekk, Hans-Peter Kohler, Walter Scheidel

Women and men from higher social echelons tended to have more children than others until the onset of the demographic transtion. Social status (measured by land entitlement, caste, or hunting proficiency) was positively related to childnumbers in several very different cultures, periods and regions. For example, a generational study - from 1700 to 1900 - of a Norway farming parish (Røskraft et al. 1992) identify that, on average, individuals with wealth had 5.1 children while those with little or no wealth only had 3.6 children.

Average fertility levels based on values of societies that have not yet experienced the demographic transition are shown in Table 1. The estimates are based on 16 studies, and restricted to studies that consider wealth or occupation. High status individuals had on average 34.9% more children than individuals with low status.

Table 1. Pre-demographic transition estimates of percentual differences in fertility by social status (measured as wealth or occupation)

From Low status to:	Middle status	High status
N=16	+25.7%	+34.9%

In societies that have endorsed the social and cultural changes that is termed the demographic transition, people from higher social strata have, on average, fewer children than individuals from lower social strata. This is verified by earlier literature reviews on the relation between fertility and education (Castro and Juarez 1993, Cochrane 1979, Jejeebhoy 1995, Lutz and Goujon 2001) and fertility and income (Barro 1991, Perusse 1993). Based on a relatively broad collection of studies, our estimates, based on 114 studies (Table 2), support a monotonic decrease in fertility by education.

Nowadays, there is a wide discrepancy between the fertility levels of high and low status individuals. While the US TFR dropped from around 3.7 (1960) to about 2.1 (1990), the lower fertility of college educated relative to non-college educated women widened from 0.3 to 0.5 children over the same time period (Statistical abstract of the United States 2001, Yang and Morgan 2004). In Japan, TFR dropped from 2.1 to 1.3 from 1966 to 2000, and fertility differentials by social status is stable; university educated had 0.3 fewer children than junior high school educated throughout the period (Retherford et al. 2004).

Table 2. Pre-demographic transition estimates of percentual differences in fertility by social status (measured as education)

From no schooling to:	1-3 School Years	4-6 School Years	7+ School Years	10+ School Years
N=114	-3.4%	-9.3%	-30.3%	-48.5%

From an evolutionary point of view, Irons (1997) argues that since human status striving evolved in an environment featuring vast resource differences, polygyny, status-related health disparities and inefficient birth control, it was adaptive for men to strive for status *per se*, since it was bound to pay off reproductively. Status allowed better access to food and health care, it allowed one to marry at a younger age, and in many societies men could have more than one wife. Hence, one reason why individuals from lower social strata would attempt to scale the social ladder was to maximise the number of surviving offspring. Today, however, as status is negatively correlated with reproductive success, status striving *per se* may have ceased to be fitness maximizing.

Allowing for long-term effects, low fertility in high-status environments need not be indicative of low fitness: cultural success may well serve to enhance inclusive fitness in the long run. Heritable wealth could have reproductive value independent of fertility as long as it increases the reproductive chances of offspring, and wealth and fertility may be of equal value in estimating inclusive fitness. This observation could explain low fertility in privileged groups. On the other hand, even fewer, more wealthy, children does not guarantee many long term offspring (Kaplan et al. 1995, Mueller 2001).

In feudal systems, in hunter-gatherer societies, in most pre-demographic transition societies, relatively few social ladders existed; a man's status was to a large extent given by the amount of inherited land, wealth and status coming from his father's social rank. Social mobility was largely restricted and few changes took place throughout individuals' lives. Long education was largely reserved for a tiny share of the population, notably the clergy.

In modern societies, social mobility and opportunities exist for the majority of the population. Status is to a much lesser extent given early in life. However, to achieve high status, or even to maintain it, demands time-demanding investments. Today, social status is attached to events and time that are extremely time-consuming: Long education, career establishment, house ownership and financial security. Such events could demand that one uses several years of reproductive life; achieving a university education often lasts until ones mid- or even late-20s, depending on the country. In addition, high status also depend on knowledge and professional networks, cultures, languages and customs, which means that long work durations, learning and travel is beneficial, which, again, often is time consuming.

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