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Gary N. Marks, "Education, Social Background and Cognitive Ability: The Decline of the Social." New York: Routledge, 2014, 292 pp.

(doi: 10.2383/81434)

Sociologica (ISSN 1971-8853)

Fascicolo 2, maggio-agosto 2015

Ente di afferenza:

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Book Review

Gary N. Marks, "Education, Social Background and Cognitive Ability: The Decline of the Social." New York: Routledge, 2014, 292 pp.

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Gary N. Marks is a sociologist who works extensively on educational inequality and social mobility in Australia and in international perspective. In his recent book *Education, Social Background and Cognitive Ability: The Decline of the Social*, he develops an extensive review of the empirical evidence on the strength of the relationships between socioeconomic background, cognitive ability and individual educational and labour market outcomes. The overarching question the author tries to answer can be summarized as follows: is socio-economic background still the most appropriate predictor of school achievement, educational attainment and occupational success? In a nutshell, Marks's answer to this question is essentially "no." Indeed, he argues that the dominant view about the persistent strong role of social background – which is shared by policy makers and social stratification scholars – is flawed and that cognitive ability is in fact a much more important determinant of individual destinies in contemporary societies.

The book is organized as follows. The first two chapters are theoretical. The first critically reflects on the state of sociological theories and their weak link to scientifically-oriented explanatory theories. This is a very interesting, clear and sound perspective, albeit not strictly connected with the rest of the volume. The second chapter juxtaposes two sociological theories that make opposite predictions on the role of social origins and, more broadly, ascriptive factors in contemporary societies. On the one hand, modernization theory predicts a decline in social inequality because of the increased importance of achievement over ascription. According to this theory, it is convenient for the society to select people through the educational system and allocate them in different occupational positions on the basis of their cognitive ability because by this way both equity and an efficient allocation of talents are guaranteed. On the other hand, reproduction theories conceive the school system essentially as a way of reproduction of existing social inequality in the society. According to this second perspective, even in contemporary societies the intergenerational transmission of status is strong and mainly persistent. Moreover, what appears to be the impact of achievement actually represents ascriptive processes at work.

The following chapters deal with measurement issues: the third describes in detail the various measures of social background, educational achievement, and occupational attainment considered in the empirical studies discussed by the author. This chapter is especially useful for those who are unfamiliar with this type of literature; for experts of the field it still represents an informative premise for what will follow in the book. The fourth chapter is particularly important, since it extensively discusses the foundation of the concept of cognitive ability, showing that it is a real, measurable and stable individual characteristic. The fifth and sixth chapters are devoted to show that cognitive ability is strongly related with various educational and occupational outcomes and that the strength of these relationships is usually larger than that with social background

measures. Chapters 7 to 9 discuss, in detail, the extent of socio-economic inequalities in educational attainment, the main theoretical explanations developed to explain these inequalities and their trends over time. Marks' assessment of the evidence is that the relationship between socio-economic background and educational attainment is at best moderate and declining over time. In chapters 10 and 11 labour market outcomes are instead investigated: the author suggests that also in this case the role of cognitive ability is much larger than the direct effect of social origin and the latter vanished over time.

Overall, this book represents a serious challenge for the conventional wisdom on social inequality. In my view, its main merit consists in highlighting the importance of considering individual cognitive abilities in status attainment and educational inequality research. This is not often done, but this lack is also partially due to data constraints. The relevance of cognitive ability is sustained throughout the book by discussing a bunch of research findings from various streams of research, spanning from sociology and economics to behavioural genetics. With his extensive and detailed literature review, the author provides an impressive amount of empirical evidence showing that cognitive ability matters for a lot of important outcomes related to individuals' success in the educational system and in the labour market. The cited empirical evidence seems effectively sustaining more the propositions derived from modernization theory rather than the radical and deterministic versions of reproduction theory. However, the distinction between ascriptive and achieved individual characteristics, which lies at the centre of the opposition between the two theoretical strands, is not always so easy to grasp at the empirical level. Similarly, the attribution of cognitive ability to ascribed factors can also be questioned to some extent. Indeed, my major remark to this work refers to the conceptual status of the cognitive ability dimension. In his book, Marks considers cognitive ability as a factor which competes with socioeconomic background in explaining individual educational and occupational outcomes. This is what the author calls the "horse race" in determining, at the empirical level, which of the two dimensions matter more for individual destinies. Even if this is not an uncommon perspective, recent literature on regression modelling clearly discourages this sort of "garbage-can-regression" approach [Achen 2005].

Indeed, in order to estimate the total effect of an independent variable (say, socioeconomic background), one should control only for the potential relevant antecedent or concomitant variables, which are both related with that independent variable and with the outcome [Morgan and Winship 2014]. In the analysis of the intergenerational reproduction of social inequalities, one should take into account those factors that can be considered as concomitant but not subsequent in the "causal order" compared to social background: the most prominent one is child innate ability (see Figure 1).

The practical problem is that this is often unfeasible in most of the observational studies (twin studies are partly an exception, but see comments below) and, therefore, one should rely on indicators of cognitive ability that are measured more or less early in the child life.

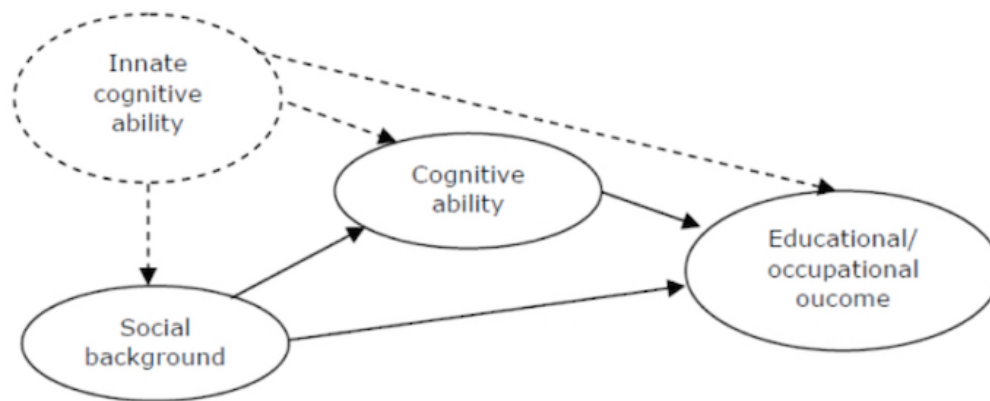


FIG. 1. Analytical Scheme for the Relationships between Social Background, Cognitive Abilities and Educational/Occupational Outcomes

Source: Author's elaboration

One key issue is that these cognitive competencies, as provided by survey data, might not be exogenous to social background, because – as showed by a number of psychological studies – family environment can affect child cognitive abilities already in early life stages and even before birth in utero (e.g. mother's smoking and drinking alcohol during pregnancy). Therefore, comparing the effect of social background and cognitive abilities measured at some point in child's life translates into equating two partially different things: the total effect of cognitive ability with the direct effect of social background (net of indirect effects via cognitive ability or proxies like school performance), which one could regard as an unfair comparison. Since cognitive competencies are positively rewarded in contemporary societies, social stratification theories predict that families with high socio-economic status will try to invest as much as possible in the development of their children's skills.

Twin studies cited by Marks can partly circumvent these problems, but have been also exposed to other criticisms that are increasingly recognized in the behavioural genetics field itself [e.g. Beckwith and Morris 2008]. A recent study using a more advanced methodology (polygenic risk score) – overcoming some problems of twin studies – found that around one-sixth of the transmission of educational attainment from parents to children is due to genetic transmission [Conley et al. 2015], which is much lower than what usually found by twin studies cited in this volume.

A second remark is that most of the studies cited by Marks refer to Anglo-phone countries, mainly United States, United Kingdom, Australia, Canada and New Zealand. This, of course, limits the scope of the conclusions, even if one aims only to generalize the results to economically developed societies. Southern and Central European countries, for instance, are rarely mentioned and these are precisely the contexts in which social origin still plays a strong role in shaping individual educational and occupational trajectories. For instance, in the widely cited book *Persistent inequalities* by Shavit and Blossfeld [1993], the percentage of variance in educational attainment accounted for by father's education and occupation was around 20% in the US, while it amounted to 35% in Italy. Furthermore, the recent comparative work coordinated by Jackson [2013] confirmed this finding with more recent data and also showed that a large part

of social background differentials in key educational transitions cannot be accounted for by previous academic achievement. Again, both total effects of social background and “secondary effects” (social origin differentials not due to previous performance) are larger in Central and Southern European countries, such as Italy and the Netherlands, rather than in the US and UK.

Finally, what is missing from the book is a discussion of the role of cognitive ability in relation to two other crucial sources of social inequalities: gender and race/ethnicity inequalities. Since the subtitle of the volume refers to the “decline of the social,” the reader could be interested in understanding to what extent also these types of inequality can be largely explained by differences in cognitive abilities and to what extent these are likely to be inherited or socially constructed.

In conclusion, I think that this is an interesting and provocative book that will contribute to the wide debate about the extent, the sources and the mechanisms of re-production of social inequalities. In my view, its main virtue is to show the increasing importance of cognitive ability in affecting relevant individual educational and occupational outcomes. Moreover, it correctly highlights that the estimates of socio-economic background differentials in traditional studies – which do not account for cognitive abilities – may be overestimated. On the other side, as I argued, distinguishing how much of the cognitive ability is genetically inherited and how much is socially produced at the empirical level is not straightforward as it seems reading this book. Therefore, the debate on the production and re-production of social inequalities in contemporary societies is far from being closed.

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