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Review of Dalton Conley, 2025, The Social Genome. The new Science of Nature and Nurture. W.W. Norton & Company, New York

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Dalton Conley is a professor at Princeton University and one of the sociologists who have contributed most to the development and establishment of sociogenomics, a field that examines how genetic variation and social environments interact to shape human behavior and social outcomes. In his new book, *The Social Genome*, Conley provides an accessible, non-technical account of this emerging field and explores its implications for the social sciences and society at large. This review aims to summarize the book, highlight its distinctive contributions, and critically reflect on the broader debates and directions it opens for sociological research.

The distinction between *blankslaters* and *hereditarians* recurs throughout the book and helps to illuminate its central message. *Blankslaters* (a category in which the vast majority of those reading this review most likely belong) argue that life outcomes are entirely shaped by nurture. Depending on their disciplinary affiliation, they attribute life outcomes to the crucial influence of family, peers, schools, neighborhoods, social policies and/or the broader social structure. Hereditarians, conversely, maintain the primacy of genes and nature, treating the role of the social as largely residual. The core thesis of Conley's book is that the traditional opposition between *Blankslaters* and *Hereditarians* is now outdated. Sociogenomics, the interdisciplinary study of how genes interact with social environments to shape behavior and life outcomes, has brokered a truce in the long-standing nature-versus-nurture debate. The focus is now on how genes and the environment jointly shape our lives.

The book is written in a non-technical style for a broad audience. It offers intuitive explanations of key technical concepts in sociogenomics and interweaves the discussion with multiple autobiographical anecdotes to illustrate the broader sociological questions that drive the book. The first two chapters provide an overview of the history of the nature versus nurture debate and introduces a central question in the study of social mobility: namely, who flourishes and who flounders in our society, and why. Although research on social mobility has long documented the enduring and substantial impact of socioeconomic background on individual socioeconomic outcomes, the predictive capacity of sociological models based on ascriptive characteristics, such as parental social class, gender, birth cohort, and race, remains limited. In fact, such models typically explain less than half of the observed variation in educational attainment or income. This limited predictive power, already noted more than fifty years ago in the first large-scale quantitative studies of educational and occupational attainment in the United States, has not improved substantially in recent decades, despite the inclusion of additional explanatory factors, such as personality traits and neighborhood context, and the use of more sophisticated analytical methods.

The next two chapters of the book present an overview of sociogenomics and discusses how it can contribute to research on social mobility. It introduces the core concept of the polygenic score (PGS), defined as a single numerical measure that summarizes an individual's genetic propensity for a given trait by aggregating the effects of many genetic variants across the genome. It is important to emphasize the notion of *propensity*: a PGS captures a general predisposition toward a trait rather than a deterministic relationship. At present, PGSs are

available not only for physiological traits such as height or body mass index, but also for characteristics and outcomes, such as cognitive and non-cognitive skills and educational and occupational attainment, that sociologists have traditionally viewed as arising solely from nurture. The inclusion of genetic information in the form of PGSs as additional explanatory factors in sociological models of socioeconomic attainment has not, however, led to a substantial improvement in their predictive power. What proves crucial, and what constitutes the focus of the remainder of the book, is the interaction between genes and the social environment.

Chapters 5 through 7 are devoted to mechanisms that blur the boundary between genes and environment: effects typically understood as social are infused with genetic influences, while genetic effects are highly contingent on context. Conley illustrates these mechanisms—including gene–environment correlations (active, passive, and evocative) and gene–environment interactions, drawing on recent empirical research. In these chapters Conley advances the book's most innovative thesis, related to the concept of the *social genome*. The social genome refers to the genomes of the people with whom we interact. Conley argues that the social genome, that is, the DNA of others, as embodied in the social contexts to which we are exposed, can exert an influence on our life outcomes that is as strong as, or even stronger than, that of our own DNA.

In the final chapter, Conley discusses two "lotteries at birth": a social lottery that shapes one's childhood environment and a genetic lottery that determines one's genetic endowment. Individuals' positions in life ultimately depend on the outcomes of these two lotteries and, crucially, on their interaction.

In this brief review, I do not focus on the mechanisms underlying the genes-environment correlations, which are already discussed in several textbooks and introductory articles on sociogenomics. Nor do I engage in detail with Conley's insightful and provocative discussion of the ethical issues raised by sociogenomic research. It suffices to note his striking observation that the greatest risk of genetic information being used for problematic purposes may arise not from authoritarian states or other malevolent actors, but from ourselves as prospective parents, through market forces and assisted reproductive technologies that already allow affluent parents to select embryos based on specific traits.

Instead, I highlight two distinctive features of the book that, in my view, make it a must-read for sociologists, and particularly for graduate students.

First, the book challenges us to recognize that our life outcomes are shaped not only by our own genome but also by the genomes of those around us, that is, by our *social genome*. Research by Conley and co-authors, for example, shows that peers' polygenic scores for smoking are more predictive of an individual's smoking initiation than the individual's own PGS. At first glance, one might interpret the notion of a social genome as indicating the triumph of nature over nurture, insofar as effects traditionally considered environmental are, according to Conley, partially driven by the genomes of those composing the environment. Paradoxically, however, the environment emerges even more salient from what might initially seem like a fatal blow to its importance. Ultimately, we begin smoking because of peer influence. The fact that peers' smoking behavior is itself shaped by their genetic dispositions does not diminish the crucial social component of our own smoking initiation.

Second, while many books introduce sociogenomics, Conley's contribution is distinctive in that he systematically links it to core sociological questions and debates. For instance, he shows how sociogenomics can inform discussions on higher education as the "great equalizer," couples' career trajectories, and peer effects on behavior. In the case of higher education, the debate centers on the claim that, among individuals who attain a college degree, the influence of socioeconomic background on income and occupational attainment is substantially reduced, that is, college attainment levels the playing field (Bernardi &

Ballarino, 2016; Torche, 2011). However, individuals who pursue higher education tend to be positively selected on both cognitive and non-cognitive skills (Karlson, 2019; Zhou, 2019). From this perspective, it is not the knowledge and competencies acquired during college that drive equalization. Rather, the apparent equalizing effect reflects the high cognitive and non-cognitive skills of those who attend college. If these traits were fully observable, the equalizing effect attributed to college attainment would be considerably smaller. As Conley emphasizes, sociogenomics now allows such traits to be partially measured through polygenic scores, enabling researchers to test the selection hypothesis and advance this debate. Other well-known phenomena, such as the immigrant optimism paradox or the educational penalties associated with parental divorce, are similarly shaped by selection on unobserved traits and could also benefit from a sociogenomic perspective.

The more general point I want to underline is that the book stimulates sociological imagination in research and addresses ongoing debates in the discipline. I would recommend it for a graduate or PhD class in sociology to help students develop their research questions and study designs. In a methods class, it could also serve as an engaging exercise, having students produce directed acyclic graphs of the many and varied relationships discussed throughout the book.

As a final remark, there is an underlying theme throughout the book that, much like a meandering river, appears and disappears across the pages: the role of chance. Discussing results from twin studies showing that roughly half of the variance in outcomes is due to non-shared environments, and highlighting the large prediction failures in the Fragile Families Challenge, Conley concludes with a suggestive list of factors that sociologists might have overlooked, such as random accidents, health shocks, teacher assignment in primary school, seating arrangements in high school, just to mention a few. Ultimately, these factors refer to chance events that impact later outcomes. He also refers to encounters with random strangers and, at different points, uses the metaphor of "bumper cars" to explain how the *social genome* (i.e., the genes of others) operates to shape our behavior.

Despite repeated references to chance throughout the book, in the conclusion, Conley formalizes only two "lotteries at birth": a social lottery that determines childhood environment and a genetic lottery that determines genetic makeup. A third type of lotteries – luck or misfortune in life events – remains largely implicit, even though it can have profound effects. Small occurrences, such as an inspiring substitute teacher, a particular dorm assignment, or barely reaching the threshold for a top college, can shape life trajectories. Metaphors like "bumper cars," which describe encounters with random strangers, underscore the pervasive influence of chance in the author's explanatory framework, yet the book offers little systematic treatment of how luck interacts with genes and social structure in determining socioeconomic outcomes.

Recognizing this gap highlights an important direction for future sociological research. Studying luck through the prism of the social genome and social environment might offer a promising path, as genes, social structure, and chance all interact to shape life outcomes. The sociology of luck is now taking its first tentative steps, and Conley's book can serve as an invaluable source of inspiration.

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