#### CHAPTER 16

# John Harry Goldthorpe: Weighing the Biological Ballast Informing Class Structure and Class Mobility

# 1 Introduction

British sociologist John Harry Goldthorpe, born 1935, studied at the Department of Social Policy and Intervention at the University of Oxford where he dedicated his career to understanding social stratification from a macrosociological perspective. Family Life in Western Societies is a perfect illustration of why Goldthorpe merits inclusion in this monograph. Therein, he details the demographic work of Malthus across several pages, cites relevant works of Murdock, and dedicates a whole chapter to the ecological systems theory of Bronfenbrenner. As it is with authors, so it is with topics. Goldthorpe treats sex ratio, family life, reproductive practices, the demographic transition, labor force economics, longevity, social mobility, monogamy, homogamy, divorce, and even the age of first birth as it differs across class.

Beyond the content of his work, and looking now at principle and perspective, one can likewise see similarities with other featured authors in this volume. Sociology is riddled with classificatory schemes and temporal frameworks: Comte and Main's conception of societal progress, Spencer's hierarchical classification of types, Marx and Engels' class theory, and Durkheim's systems. Goldthorpe reviews these with due deference, but is too much the empiricist to be doctrinaire when it came to his own attempts at schema construction (Goldthorpe 1981) or modeling (Erikson and Goldthorpe 1993). Goldthorpe actively defends a positivist, empiricist approach to social science, validating pretentions

to objective, knowable truths against those many radical relativists for which social science "represent[s] merely the rationalization or intellectual camouflage of the status quo" (Goldthorpe 1996; p. 120). Even while admitting that statistical procedures are doubly constructed in that select variables are culled from a larger set of possibilities, and thereafter treated with select analytical tools, Goldthorpe insists that this is part and parcel of normal scientific practice and progress. In the end, rival studies and various techniques can be compared, so as to correct one another (Goldthorpe 2016).

More than defending and exemplifying the inductive, empirical process of science, Goldthorpe productively walked the line with respect to scope, being averse to hyper-specialization and grand synthesis in equal measure. Goldthorpe himself (2016; p. 57) contrasts holistic and individualistic extremes, insisting the scope of sociology be the empirical study of "aggregate-level, probabilistic regularities, emergent from the states and behavior of individual members of populations." Whether because class is a multiply determined amalgamate, or stemming from intellectual predilection, Goldthorpe (1996) recognized that grand sociological phenomena defied the conceptual powers of hyper-specialists. Citing Goldthorpe, Bryant (2006; p. 75) discusses hyper-specialization as a "faddish fascination" with historical "uniqueness" and "contingency" that "has deflected social science from its mission to identify omnitemporal laws and causal universals," as sought for by Comte, Spencer, and Marx. On the other hand, Bryant cites Goldthorpe as a critic of grand synthesis, concerned about the ability to differentiate between theory and data at the local level. Goldthorpe is in short, a cautious hedgehog. Really, he is like many another featured author in balancing between Berlin's categorical extremes. He is neither dilatant nor pedant.

#### 2 SOCIAL CLASS AND SOCIAL MOBILITY

Looking across Goldthorpe's writings, one finds an attempt to define class and its correlates, to describe the organic societal features that perpetuate class stratification, and an analysis of policies meant to permeate class boundaries. First, for the correlates of class. Goldthorpe numbers income, employment, status, educational attainment, and vocational position among the defining features of class. In addition to such obvious class correlates, there is fertility. Higher classes were more likely to use contraceptives, whereas lower classes were more likely to contract

unintended pregnancies. Family planning differentials were also observed in the age of first birth, with first births prior to twenty years being most common in the lower subset of classes. Though there is a tendency for smaller families across classes at present, many of these class-related demographic differences were present since sound data collection began in the 1880s. Perhaps indicative more broadly of parental investment, class positively predicted breast feeding, with nursing mothers becoming less common in a stepwise fashion with descent into the lower classes. Goldthorpe describes infant mortality statistics that are generally low, but which are approximately twice as high in the lower classes as compared with the uppermost class. Class also separated, in the same direction, paternal involvement, corporal punishment, bedtime routines, and reading. Arguing for a unified approach to class that packages the variables described above, Goldthorpe (1987) laments that "differences such as those in mortality, fertility, and childcare have been presented as interesting facts in their own right and little more." We mention here only that the want of such a unified approach extends from the inability of standard social science models to explain why these latter three are strong correlates of class.

Goldthorpe is as much interested in cross-class mobility as in class itself. Collapsing across some nuance and much noise, Goldthorpe finds class to be "highly resistant to change." Goldthorpe (1980; p. 86) continues, remarking, "...no greater degree of openness has been achieved in British society over recent decades," in spite of "legislative and administrative action." Marxist Theory predictive of proletarianization and mass subordination is no more empirically supported than is Liberal Theory, its optimistic counterpart conjecturing unprecedented openness deriving from industrialization, capitalism, and free markets. Naturally then, Goldthorpe has made efforts to examine the reasons for class stability, which he finds in differential educational opportunity, childcare at dissimilar social levels, children's progress in school, success on examinations, participation in higher education, and "professional and academic qualifications for highly-rewarded and highly-esteemed occupations" (Goldthorpe 1987; p. 169). Intergenerational wealth is of course not neglected. Inheritance of property is a self-evident mechanism by which class status propagates through family lines. Further still, neighborhoods, in that they diffuse general standards of living (Goldthorpe 1987), have inertial properties. Additionally, Goldthorpe (1987; p. 164) found that marriage, on balance, perpetuated class distinctions. The practice

of homogamy prevailed. Homogamy is the coupling of like partners on a variable; in this case, class. This is an illustration of what is otherwise known as positive assortative mating. Though there are tales, as well as many a real-world example, of beautiful lower-class women ascending several class rungs on the ladder of marriage, statistically speaking, this happenstance is atypical. Goldthorpe's finding in this respect echoes the later work of Charles Murray, whose Coming Apart documented intellectual and educational homogamy, which Hertler (2017) interpreted as positive assortative mating on the basis of life history speed (Figueredo and Wolf 2009; Wolf and Figueredo 2011).

Distilling the above, class might be said to be perpetuated organically, meaning largely from the bottom-up by decisions of individual actors, whether it be in practicing homogamy, transmitting educational legacies, or by transferring wealth from father to son. But what of the state's ability to interfere with this self-perpetuating process? Grave! Grave is the term Goldthorpe applies in judging the success of the general strategy of egalitarian reform instituted by British liberals and social democrats. Goldthorpe repeatedly comes back to asking why class boundaries are relatively impermeable even in the face of natural market pressures and engineered social policies:

...if...a significant amount of unexploited ability does exist among the members of less advantaged classes, why have educational expansion and reform and generally increased pressure for meritocratic selection not produced some consistent movement towards more equal class competition. (Goldthorpe 2000; p. 244)

Goldthorpe's answer is multifactorial. He speaks of limited peer pressure and parental encouragement as potentially explaining lower uptake of educational opportunities among the lower classes. Much later, Goldthorpe (2000; p. 56) identifies indigenous, local processes of social selection that "have proved hard to eradicate" even in the face of national educational initiatives. Further discussion suggests that his answer to the above question is that simply granting access is insufficient. You must not only lead the horse to water, but force him to drink. Focusing solely on educational access, "neglects the fact that educational decision-making remains conditioned by the class situations in which it takes place...". Building on this explanation, Goldthorpe charges that extant policy is unequal to dislodging entrenched elites:

social inequalities via legislative and administrative measures of a piecemeal kind that can be carried through without venturing too far beyond the limits of 'consensus' politics...this strategy grossly misjudges the resistance that the class structure can offer to attempts to change it; or, to speak less figuratively, the flexibility and effectiveness with which the more powerful and advantaged groupings in society can use the resources at their disposal to preserve their privileged positions. (Goldthorpe 1980; p. 252)

These politicians and their policies betray "a serious underestimation of the forces maintaining" class distinctions, which Goldthorpe estimates will be overcome only by significantly altered legislation or class revolution (Goldthorpe 1980; p. 252).

### 3 BIOLOGICAL BALLAST

To summarize, Goldthorpe has found (1) many social and bio-demographic variables to be class correlates, (2) class to cohere as a reliable constellation of variables, (3) class mobility to have but a muted response to social policy, (4) social mobility to only briefly and partially change in response to organic and engineered social revolutions, such as industrialization and communization, but (5) to more consistently undulate in an un-patterned manner across time and nations. Distilled to its utmost, class is coherent bundle of variables whose dynamic stability is only modestly responsive to social policy and temporarily disrupted by societal transitions.

Such macroscopic themes came at the expense of a lifetime in which particular time periods were intensively studied and then compared with broader historical trends. In identifying these five themes, Goldthorpe has accomplished much. However, Goldthorpe is less successful when he undertakes the "ultimate goal of explaining why social classes exist" (Goldthorpe 2000; p. 206) and in attempting to elucidate intractable limitations on mobility.

Restricted explanatory success may arise from a failure to consider biological foundations of class stratification. Goldthorpe sometimes mentions "physical and cognitive capacities," but these never figure deeply into his understanding of how class originates and is maintained. While he better understood the extra-economical aspects of class, in this sense Goldthorpe is no different from his general characterization of British sociologists who are "consistently wary of anything that smacked of genetic determinism

or biological explanations of human behavior" and who "generally have rejected sociobiology" (Goldthorpe 1996; p. 10). Perhaps this stems from his ideological commitment to egalitarian principles of equality. Born the son of a colliery clerk, Goldthorpe exemplified the social mobility which he investigated as an academic and hoped for as a humanist. Whether for this reason or another, Goldthorpe (1980; p. 251) identifies with social mobility, not simply as a social phenomenon to be empirically investigated, but as a "goal to which we have a value commitment: namely, that of a genuinely open society." When considering striking inequalities evident in, for instance, transmissibility among fathers and sons from service-class to working class, Goldthorpe (1980; p. 252) writes thus:

Where inequalities in class chances of this magnitude can be displayed, the presumption must be, we believe, that to a substantial extent they do reflect inequalities of opportunity that are rooted in the class structure, and are not simply the outcome of the differential 'take-up' of opportunities by individuals with differing genetic, moral, or other endowments...

In saying this, Goldthorpe explicitly disallows a serious causal role to sociobiology, or as he unfortunately states, Social Darwinism. He fails to take seriously what John Adams and Thomas Jefferson, the north and south poles of the American Revolution<sup>2</sup> and de facto leaders of their respective parties, described as "a natural Aristocracy among men; the grounds of which are Virtue and Talents." "All are subject by nature to equal laws of morality, and in society have a right to equal laws for their government," Adams wrote, "yet no two men are perfectly equal in person, property, understanding, activity, and virtue, or ever can be made so by any power less than that which created them."

While acknowledging that inequalities of class structure are not simply the outcome of intrinsic "virtues," genetic, moral or otherwise, we understand life history variation to partially underpin class distinctions. What is Adams's natural aristocracy comprised of, if not augmented intelligence, planning, conscientiousness, delay of gratification, future oriented thought, enculturation, education, and other life history correlates. Often, we have suggested that the variable under study by a featured author should be subsumed into a life history framework. Class is different. It is the variable that most globally overlaps with life history. More than anything else, class is a lay description of life history. Both are multifactorial constructs, which furthermore share many of the same particular traits; only class focuses on the sociological derivatives of life history without recognizing their biological origins. Likewise, class aggregates its variable set with no reference to a binding agent, whereas life history variables are bound *logically* by the pace of living and time relevant investment, and *causally* by population density and mortality regime. Understanding class principally as a manifestation of life history explains the many correlates of class, the reason why class coheres as a construct, why class stratification exists, and why it persists even after implementing egalitarian social policy.

Therefore, we contend that class is in some ways a reflection of life history speed: social stratification derives, in the main, from evolved life history variation within populations; just as mean differences derive, in the main, from evolved life history variation between populations. The latter part of this last sentence is one to mark and ponder. Thus far, we have described life history as it varies between populations, but Goldthorpe's studies of social class afford a perfect entry into discussing life history as it varies within populations. There is more life history variation within broad continental populations than between them. The same is true for individual life history traits. Why? In answer, we have to review two indispensable concepts. First, neither population density nor mortality regime, again the two drivers of life history speed, remains fully stable. Populations are thus evolving in response to moving targets. The optimal life history speed may have, for instance, slowed and speeded as plague ebbed and flowed across early modern Europe. Intermittent and incomplete stability naturally pulled for the evolution of a life history continuum, rather than an optimum. The second indispensable concept explains why life history speed would vary considerably within populations even if both mortality regime and population density remained absolutely stable. We reference previous literature on the coral reef model (Figueredo et al. 2010) and environmental heterogeneity (Penke et al. 2007; Dubuc-Messier et al. 2017) to establish the plain fact that environments are multifaceted. Within human populations, this multifaceted heterogeneity augments as a function of interdependence and density. There opens a range of niches that can be successfully occupied by as many variants across the life history continuum. Within a large city, one can function as a sLH-selected police chief or an fLH-selected psychopath; their extremely different means can bring the same end, both accrue resources and convert them into progeny.<sup>3</sup> Thus, in addition to the drivers of life history speed being short-lived and showing incomplete stability, all human societies, and most especially dense, mature civilizations, offer a variety of niches which can be exploited by a spectrum of life history speeds.

Social class once related to rank and privilege as ensconced in title and law. Concepts like the Great Chain of Being, wherein everyone had his place under God, Pope, and King, bolstered class distinctions. To the degree that societies have been affected by the Industrial Revolution, free market capitalism, and meritocratic selection, class distinctions came to rest more fully on distinctions in ability, and thereby differences in life history speed. <sup>4</sup> There remain many vestigial barriers to class mobility, preventing closer approximations to life history distributions. Nevertheless, caution must be used when attempting to separate artificial class distinctions from those that are in fact secondary outgrowths of the life history continua. What follows is one of the more subtle points we advance, and its underappreciation is responsible for manufacturing what would otherwise be recognized as impossibly utopian policy. This is the concept of the extended phenotype (Dawkins 1982). The phenotype is the organism as built by the genotype. The phenotype then includes all that we see: bones, wings, teeth, and nails, as well as skin, scales, hair, and tails. Now the extended phenotype is just as rightly part of the phenotype, but is not a physical feature, but a behavioral disposition. The camel's humps and squirrel's' scatter hoard, the whale's blubber and the termite's nest, the peacock's plume and the bower bird's bower, like the turtle's shell and the beaver's dam are all, respectively, representative of phenotypes and extended phenotypes. The dispositions to hoard, build, collect, and dam are all outgrowths of a bio-pattern, just as enculturation through education, making, saving, and transmitting wealth, and exploiting opportunities through planning and preparing, are all manifestations of a sLH-selected phenotype. There is a still more subtle point: sLH-selected persons, with probabilistic certainty, will ascend to the upper echelons within complex and orderly environments, not incidentally because these societies are in some ways an outgrowth of the sLH-selected extended phenotype. The sLH-selected are thereby thriving in their self-constructed environments, as does the beaver thrive in his dam. Such features are treated by Goldthorpe as impediments to mobility, which indeed they are, but they also must be recognized bio-behavioral outgrowths of slow life history strategists that are neither randomized nor destructible.

Certainly, one is free to pursue social policies aimed at social mobility. Indeed, there are many social policies present and possible, which productively target vestigial impediments to equality of opportunity. However, attempts at forcing mobility rates beyond social stratification as informed by life history speed, transitions from removing impediments to thwarting the strategy of *sLH*-selected persons who have attained to the higher classes, or, alternatively, attempting to artificially impose a *sLH*-selected extended phenotype on an *fLH*-selected segment of the population. In neither preface nor epilogue, or anyplace between, are social policy positions promulgated; the present paragraph not excepted. We mean not to warn that the boundary between natural and artificial impediments should not be crossed, but only to confirm and explain the existence of such boundaries.

## 4 Support

That class stratification is only subject to modest and temporary flux through the winds of progressive social policies, organic social change, and socialistic economic regimes, as documented in Goldthorpe's own work, are suggestive of biological ballast. Before considering life history specifically as that species of biological ballast, consider first that there is indeed a genetic component to social class. Intelligence (Jensen 1968), educational attainment (Teasdale and Sørensen 1983; Miller et al. 1996), personality (Bowles and Gintis 2001; Duckworth and Weir 2010; Perkins 2016), economic earnings (Liu and Zeng 2009), and criminality (Van Dusen et al. 1983) are all partially genetic determinants of social class stratification. Heritable determinants have also been attributed to class as an aggregate construct (Herrnstein and Murray 1994; Clark 2008, 2009). The same is true of life history. First, sexual decisions, marriage, divorce, fertility metrics, total family size, parenting behaviors, though they might just as easily be thought markers of class, are substantially heritable expressions of life history speed (Figueredo et al. 2006). Then, there are aggregate estimates. As reviewed previously (Hertler 2017), and as introduced in fourth section of Chapter 13, life history heritability estimates range from 0.52 to 0.68, inducing Figueredo et al. (2006) to conclude that, "life-history strategy is predominantly under the control of regulatory genes that coordinate the expression of an

entire array of life-history traits." So life history and class are both partially heritable as aggregates, and furthermore share constituent traits, which are themselves partially heritable.

Then, there is the issue of class and race, two concepts that are mutually instructive, and which are jointly presented here for the express purpose of demonstrating a life history basis for class. Life histories cut across race and class; race represents life history variation between populations, while class represents life history variation within populations. Economically and statistically speaking, some races are disproportionately represented in higher or lower classes within mixed race societies. In demonstration thereof, consider the following graph produced by the United States Census Bureau, 5 which illustrates decades of data depicting stable differences in household income across Black, White and Asian groupings (Fig. 1).

En masse, the trend lines rise and fall, representing fluctuation in macroeconomic indicators of national wealth; yet, by contrast, relative positions do not change. At every year for which there is data, Asian American households take in approximately twice as much as African American households. We cannot stress enough that this economic stratification across racial categories is partially affected by bondage, peonage, segregation, and ongoing discrimination (Daniel 1972; Woodward, 1955, 1981, 2008; Harris 1964). A chapter, nay a book, of caveats and qualifiers could intervene. Notwithstanding, if injustice and discrimination were the primary determinants of class, Asian Americans would fall intermediately between African and Caucasian Americans. Instead, it is Caucasian Americans that occupy this intermediate position, exactly as explained by Rushton's (2000) applications of life history theory to broad racial groupings. Bolstering a life history narrative, cross-racial economic earnings correspond to some of the most biological life history traits that are not subject to discriminatory attitudes or policies:

Gamete production and multiple birthing; speed of menstrual cycle; speed of sexual maturation; age of first sexual intercourse; number of premarital partners; frequency of premarital intercourse; frequency of sexual fantasies; frequency of marital intercourse; number of extramarital partners; permissive attitudes; low guilt; primary sexual characteristics; secondary sexual characteristics; biologic control of sexual behavior; androgen levels; sexually transmitted diseases. (Rushton 2000; p. 166)

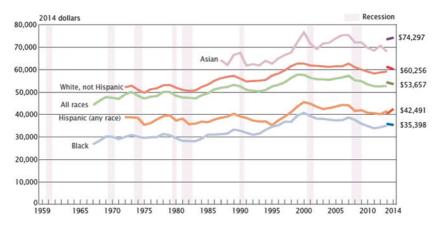


Fig. 1 Real Median Household Income by Race and Hispanic Origin: 1967–2014. *Note* The 2013 data reflect the implementation of the redesigned income questions. See Appendix D for more information. Median household income data are not available prior to 1967. For more information on recessions, see Appendix A. For more information on confidentiality protection, sampling error, nonsampling error, and definitions, see ftp://www.ftp2.census.gov/programs-surveys/cpc/techdocs/cpsmarl5.pdf (*Source* U.S. Census Bureau, Current Population Survey, 1968–2015 Annual Social and Economic Supplements)

What we have then are racial differences overlapping with class stratification. Race categorization predicts class status, at least as it is approximated by this crude proxy of economic earnings. To highlight the relevance of juxtaposing race and class, we again repeat that life history evolution underpins class differences as they are alternately expressed within and between races. Moreover, recall that class itself overlaps with life history in its description, in its being partially heritable, and in that both social class and life history have partially heritable constituent variables. Notwithstanding, only further research will more pointedly demonstrate that class stratification exists, and class mobility is limited, because both are ultimately constrained to some degree by a process of life history evolution which maintains intra-population variation.

# Notes

- 1. https://en.wikipedia.org/wiki/John\_Goldthorpe#Early\_life.
- 2. This characterization was made by patriot, revolutionary, and physician Benjamin Rush who was instrumental in fostering the correspondence from which these quotes are taken.
- 3. Diversity along the life history continuum is very likely maintained by negative frequency dependent balancing selection, an evolutionary process wherein a trait or strategies fitness is pitted against its frequency.
- 4. As we make this claim, we acknowledge that these self-same conditions were productive of generating more obvious class distinctions. For instance, under these conditions, greater wealth was available, which could be spent on distinguishing baubles, the use of which was no longer controlled by law.
- 5. https://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-252.pdf.
- 6. This book is written in collaboration with Catriona Llewellyn and Clive Payne.

# REFERENCES

- Bowles, S., & Gintis, H. (2001). The inheritance of economic status: Education, class and genetics. International Encyclopedia of the Social and Behavioral Sciences: Genetics, Behavior and Society, 6, 4132–4141.
- Bryant, J. (2006). Grand, yet grounded: Ontology, theory, and method in Michael Mann's historical sociology. In J. A. Hall & R. Schroeder (Eds.), An anatomy of power: The social theory of Michael Mann (pp. 71–97). New York: Cambridge University Press.
- Clark, G. (2008). A farewell to alms: A brief economic history of the world. New York: Princeton University Press.
- Clark, G. (2009). The indicted and the wealthy: Surnames, reproductive success, genetic selection and social class in pre-industrial England. HYPERLINK. http://www.econ.ucdavis.edu/faculty/gclark/Farewell%20to%20Alms/Clark.
- Daniel, P. (1972). The shadow of slavery: Peonage in the South, 1901–1969. Champaign: University of Illinois Press.
- Dawkins, R. (1982). The extended phenotype: The long reach of the gene. New York: Oxford University Press.
- Dubuc-Messier, G., Réale, D., Perret, P., & Charmantier, A. (2017). Environmental heterogeneity and population differences in blue tits personality traits. Behavioral Ecology, 28(2), 448-459.
- Duckworth, A., & Weir, D. (2010). Personality, lifetime earnings, and retirement wealth (Working Paper WP 2010-235). University of Michigan Retirement Research Center.

- Erikson, R., & Goldthorpe, J. H. (1993). The constant flux: A study of class mobility in industrial societies. New York: Oxford University Press.
- Figueredo, A. J., & Wolf, P. S. A. (2009). Assortative pairing and life history strategy. *Human Nature*, 20(3), 317–330.
- Figueredo, A. J., Vásquez, G., Brumbach, B. H., Schneider, S. M. R., Sefcek, J. A., Tal, I. R., et al. (2006). Consilience and life history theory: From genes to brain to reproductive strategy. *Developmental Review*, 26(2), 243–275.
- Figueredo, A. J., Wolf, P. S. A., Gladden, P. R., Olderbak, S. G., Andrzejczak, D. J., & Jacobs, W. J. (2010). Ecological approaches to personality. In D. M. Buss & P. H. Hawley (Eds.), The evolution of personality and individual differences (pp. 210–239). New York: Oxford University Press.
- Goldthorpe, J. E. (1987). Family life in Western societies: A historical sociology of family relationships in Britain and North America. New York: Cambridge University Press.
- Goldthorpe, J. E. (1996). The sociology of post-colonial societies: Economic disparity, cultural diversity, and development (3rd ed.). New York: Cambridge University Press.
- Goldthorpe, J. H. in collaboration with Catriona Llewellyn and Clive Payne. (1980). *Social mobility and class structure in modern Britain*. New York: Oxford University Press.
- Goldthorpe, J. H. (1981). The class schema of 'Social Mobility and Class Structure in Modern Britain': A reply to Penn. *Sociology*, *15*(2), 272–280.
- Goldthorpe, J. H. (2000). On sociology: Numbers, narratives, and the integration of research and theory. New York: Oxford University Press.
- Goldthorpe, J. H. (2016). Sociology as a population science. Cambridge, UK: Cambridge University Press.
- Harris, M. (1964). *Patterns of race in the Americas*. New York: W. W. Norton & Company.
- Herrnstein, R. J., & Murray, C. (1994). Bell curve: Intelligence and class structure in American life. New York: Simon & Schuster.
- Hertler, S. C. (2017). Life history evolution and sociology: The biological backstory of coming apart: The state of White America 1960–2010. New York: Palgrave Macmillan.
- Jensen, A. R. (1968). Social class, race, and genetics: Implications for education. *American Educational Research Journal*, 5(1), 1–42.
- Liu, H., & Zeng, J. (2009). Genetic ability and intergenerational earnings mobility. *Journal of Population Economics*, 22(1), 75–95.
- Miller, P., Mulvey, C., & Martin, N. (1996). Earnings and schooling: An overview of economic research based on the Australian Twin Register. *AMG Acta geneticae medicae et gemellologiae: twin research*, 45(4), 417–429.
- Penke, L., Denissen, J. A., & Miller, G. F. (2007). The evolutionary genetics of personality. European Journal of Personality, 21, 549–587.

- Perkins, A. (2016). The welfare trait: How state benefits affect personality. London: Palgrave Macmillan.
- Rushton, J. P. (2000). Race, evolution, and behavior: A life history perspective (3rd ed.). Port Huron, MI: Charles Darwin Research Institute.
- Teasdale, T. W., & Sørensen, T. I. A. (1983). Educational attainment and social class in adoptees: Genetic and environmental contributions. *Journal of Biosocial Science*, 15(4), 509–518.
- Van Dusen, K. T., Mednick, S. A., Gabrielli, Jr., W. F., & Hutchings, B. (1983). Social class and crime: Genetics and environment. In *Prospective studies of crime and delinquency* (pp. 57–71). Dordrecht, The Netherlands: Springer.
- Wolf, P. S. A., & Figueredo, A. J. (2011). Fecundity, offspring longevity, and assortative mating: Parametric tradeoffs in sexual and life history strategy. *Biodemography and Social Biology*, 57, 171–183.
- Woodward, C. V. (1955). The strange career of Jim Crow. Oxford, USA: Oxford University Press.
- Woodward, C. V. (1981). Origins of the new south, 1877–1913: A history of the South (Vol. 9). Baton Rouge: LSU Press.
- Woodward, C. V. (2008). The burden of Southern history. Baton Rouge: LSU Press.