

Green's *Predicting Thirty-Five Years On*

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Long before the current embrace of empirical methods by policy-minded philosophers of education, there was Tom Green, Cornell philosophy Ph.D. classmate of Harry Frankfurt and Ed Gettier, author of *Predicting the Behavior of the Educational System*, president of both PES and AERA, and member of the National Academy of Education. Green was in the seminar of Norman Malcolm's to which Wittgenstein made an unannounced visit, prompting puzzlement about the identity of the odd fellow in the back who seemed to be imitating Malcolm's mannerisms. Yet his first job after graduate school was to design the school system for the planned community of Gananda, New York, an experience that launched him on a career of methodological improvisation in grappling with questions of educational policy and practice.

A remarkable aspect of *Predicting the Behavior of the Educational System* is that its questions are essentially empirical. Green writes that:

In the beginning...My purpose was merely to...gain a better understanding of the specific and practical problems of educational policy that so dominated the 1960s. It was a sobering experience, this confrontation with the need to translate ideals and visions of the future into such mundane matters as budgets, buildings, regulations, legislation, and all the rest in the apparatus of public policy...

[I]n the attempt to study the future, I discovered most of all the obligation to revisit the past...I began to search for what, in the world of education, does not change...¹

Revisiting the past turned into a project in compiling historical data on rates of high school completion, higher degrees obtained, and income distributions for the period from 1870 to 1975. The search for unchanging "structural necessities" of "the educational system" led Green to formulate an educational analogue to ideal market theory – a rational choice model of how educational systems function. From an explanatory perspective, Green's model reflected a commitment to methodological individualism. This was in an age dominated by revisionist histories predicated on neo-Marxist functionalism, according to which schools are among the "secondary" institutions whose functions are dictated by economic relationships. The conventions of the functionalist orthodoxy required that patterns of enduring inequality be the very *point* or *function* of the systems of free, universal, secondary schooling that were brought to scale in both the U.S. and elsewhere through the decades Green and his assistants studied.² Green showed that imputing a function to educational systems does no explanatory work; a better explanation of enduring inequality is that it is an aggregate product of countless individual choices.

The explanation, in outline, is that as access to high school expands and labor markets become saturated with high school graduates, the labor market value of a diploma will collapse, and the diploma will cease to have any exchange value except as a qualification for admission to higher education. This is Green's *law of zero correlation*, presented as a tautology or necessary truth: if a factor (e.g., high school

diploma) is universally distributed in a population, that factor cannot explain variation in the distribution of any other factor present in that population (e.g., occupational status). People who are already advantaged will seek higher and more prestigious degrees as the high school diploma ceases to confer competitive advantage, and the resulting increased demand for higher education will fuel further growth of an educational system that is *unitary* in the sense that its parts interact through a common medium of exchange, in the form of credentials. Those who are least advantaged and obtain a credential only in the latter stages of the system's expansion will not enjoy the advantages accruing to those who preceded them. Worse still, they will be far more disadvantaged by failure to obtain the credential than those before them.

Green was the only philosopher to undertake a major study of the dynamics of credentials and education system growth, and his work was unusual in its attempt to construct a formal model.³ Its most important lesson is that *expanding* educational systems to accommodate everyone is not an effective way to promote equal opportunity (EO). It implies that today's efforts to promote equal opportunity by expanding access to higher education are as doomed to failure as efforts to equalize opportunity through universal access to secondary education were.

This immensely important lesson notwithstanding, the accounts of "credentialism" that were developed in that era overlooked two things: (1) the fact that educational systems are not merely secondary institutions; (2) the historical contingency of the integrated hierarchical structure of the U.S. educational system. Green and others in that era shared the assumption that work is what it is and (as far as their relationship to work is concerned) educational systems merely prepare and credential students for it. This assumption blinded them to the immense power with which educational systems would alter the nature of work and the *structure of opportunity*, by which I mean the nature of occupational and social roles and how they are related to one another with respect to stratification, terms of access, and other factors. The growth of educational systems has stimulated the development of a more intellectualized and stratified structure of occupations and more daunting barriers to labor force participation, pushing EO ever farther out of reach. As pessimistic as the theories of the 1970s were, they were in this respect not pessimistic enough.

On the other hand, Green's ideal model of "the educational system" epitomized an assumption of universal applicability that invited undue pessimism about the prospects for educational policy reforms favorable to EO. The model explains the growth dynamic of *integrated hierarchical systems* of education (as I shall call them), but it does not explain why educational systems would take this form. Not all do, and recent work on credentials, mobility, and stratification has probed the historical contingencies underlying the U.S. system and a notable alternative to it – the German system.⁴ Far from having been founded as stepping stones to college, public high schools in the U.S. were, in many areas, initially regarded as "people's colleges," and they competed directly with colleges and proprietary technical and professional schools. It was only later, around 1920, and owing to circumstances that might have been different, that the University of Michigan's decision to offer admission to all graduates of high schools that met its accreditation standards proved to be a decisive

turning point in the embedding of high schools within an integrated hierarchical system.⁵ There is no denying that Americans' understanding of EO lends credibility to the system that emerged, but the upshot of Green's model and its oversights is that the way the U.S. is pursuing EO is self-defeating. Another implication is that structural reform should be predicated on understanding why high school credentials retain strong labor market exchange value in Germany and not the U.S. Of the two systems, the German one may be closer to securing EO and fulfilling the U.S. public school movement's aspirations.

In the U.S., equal opportunity is commonly understood to require that all children be prepared for college, so they can reach the threshold of adult maturity without any attractive life opportunities having been foreclosed. Because a college education is now an all but essential prerequisite for a middle-class existence in the U.S., educators are widely perceived as irresponsible, acting on a tragically flawed "deficit model" of inability to learn, or worse, if they do not prepare and encourage all students to go to college. Meanwhile, the politics of higher education are focused on expanding access to college education, on the assumption that it is only through access to higher education that young people who have crossed the threshold of ethically significant self-determination can freely set their own course in life. I shall argue in response that the problem is not that our schools are failing to prepare all students for college, but that we have an integrated hierarchical system that *requires* everyone to go to college in order to have decent life prospects. The German system does not impose this requirement, so it's a good place to start in considering how we might do better.

I begin by considering the U.S. system in more detail, using the term *market credentialism* to refer to the competitive pursuit of hierarchically-ordered credentials and competition-driven growth in the U.S. system of education and others modeled on it. I will then consider some contrasting features of the German system, and close by discussing how EO might be rethought.

MARKET CREDENTIALISM

Vast and overshadowing private fortunes are among the greatest dangers to which the happiness of the people in a republic can be subjected...

Now, surely, nothing but Universal Education can counter-work this tendency to the domination of capital and the servility of labor.⁶

Horace Mann, prominent leader of the common school movement that ultimately gave the U.S. its system of universal public secondary education, wrote these words in 1848, when few Americans earned a high school diploma, and very few of those who did were poor. It was easy to imagine then that universal secondary education could eradicate poverty and the domination of one social class by another, but by the 1960s it had become evident that it was not the "great equalizer" many had supposed. Instead, as high school completion rates reached about 70%, a high school diploma became an essential prerequisite for obtaining work, having become so common that employers expected it, and no longer conferred much advantage on those who had it, except as a ticket of admission to college. In these circumstances, the obvious reason why a high school diploma would not provide groups of "last entry" with the same advantage it provided others before them was the saturation

of the labor market with high school graduates. Schools, colleges, and universities, with their burgeoning graduate and professional schools, had come to function as one *integrated hierarchical system*, outside of which there were few, and distinctly inferior, opportunities to acquire meaningful preparation and certification for work.⁷ One aspect of it being an integrated hierarchical system is that having advantage in securing positions higher in the socio-economic hierarchy is largely a function of securing credentials at higher levels of the educational system and from higher status institutions. Another aspect of it being such a system is that when the labor market is saturated with credentials at one level of the system, the only value a credential at that level will have is in securing admission to a program at a higher level. If the system were not hierarchically integrated in this way, and if high school diplomas retained socio-economic exchange value outside it, the implications for equal opportunity would not be as dire, and Mann's vision might be substantially fulfilled.

If the result of the complexity of the U.S. system is great expense, collective futility, and frustration of equal opportunity, it is not because public elementary and secondary schools are failing in their assigned roles in this integrated hierarchical system. Rather, it is because the U.S. has a robust market in the provision of higher education, and the assigned role of primary and secondary schools is to enable every child to go to college. The system has the apparent merit of being essential to achieving EO, and all the evident merits of free enterprise, consumer choice, and outstanding accomplishment in research. Yet together these features make universal primary and secondary education not the great equalizer, but the vast receiving end of a funnel through which all must pass to succeed. Those who begin ahead will, by and large, remain ahead and, like the molecules of a fluid moving through a constricted space, they will be prodded along at ever-greater speed by those pressing in behind them until they exit the funnel's distant narrow end.

Historian David Labaree wrote in 1997 that:

the inner logic of the credentials market is quite simple and rational: educational opportunities grow faster than social opportunities, the ability of a particular diploma to buy a good job declines, so the value of educational credentials becomes inflated.⁸

Why do educational opportunities grow faster than social opportunities? Labaree cannot be referring to the system of primary and secondary education that had grown enough to accommodate every child in the U.S. by the 1960s. He can only be referring to institutions of higher education and their enterprising history of finding opportunities to expand and to offer further and more differentiated degrees. At the baccalaureate and post-graduate levels of the U.S. educational system, there is no established limit to the number of institutions that compete for students and tuition revenues, and there is no limit to the number of students upon whom they may collectively confer degrees. Although there are many public institutions of higher learning as well, they are often similarly dependent on attracting students whose families can pay tuition charges. This is a market system in higher education, and in such a system the educational opportunities and availability of earned credentials will grow to meet demand, and the demand may far exceed the supply of corresponding "social opportunities," to use Labaree's term. Individual institutions need not con-

cern themselves with this excess as long as they can recruit enough students of their own, and they will prefer that the programs of competing institutions be the ones to contract or close their doors if the market in a credential contracts. As the supply of a credential exceeds the opportunities that can be secured with it, the “exchange value” of the credential falls – there is “credential inflation” – and students with the means and inclination will seek further and more prestigious degrees. The market value of undergraduate degrees falls as such degrees become prevalent, just as the market value of high school degrees fell as high school degrees became prevalent. And it does not stop there.

Large differences in family resources and the freedom of educational providers and consumers to pursue their own interests will ensure that, by and large, the least advantaged by birth will remain as they began, at the bottom of a stratified structure of opportunity. What has been overlooked is that one effect of the creation of an integrated hierarchical system has been to stimulate the creation of proliferating arrays of new specialists and forms of expertise. This has profoundly altered the nature of work and the structure of opportunity, as these specialists have established new professions and found ways to make themselves useful to employers. This is a leading conclusion of recent work on the immense social impact of educational expansion.⁹ The thesis that education is merely a secondary institution shaped by economic relations wrongly assumes that the higher reaches of educational institutions could not themselves originate and propagate new forms of social complexity. But they can and they do, and they thereby alter the nature of work and create a more complex and stratified structure of opportunity. This implies that higher education does not simply offer more advantage to the already advantaged; it plays a systemic role in creating a world of opportunities that are increasingly unequal and dominated by the analytical work that is characteristic of academic culture.

Whatever the advantages may be of a system in which the growth of exotic new breeds of academic specialization creates a more complex and stratified world of opportunity, the dynamics of competition-driven educational growth and the role of higher educational growth in creating a more stratified structure of opportunity suggest that public efforts to widen access to higher education *in order to* equalize socio-economic opportunity are deeply misguided. The effect is to lengthen the educational funnel through which all must pass, and to create a structure of opportunity ever more skewed toward rewarding business applications of analytical prowess. U.S. educational policy has focused on expanding access to college, but to the extent that this succeeds, it will contribute to the declining labor market value of college degrees. The contributions to human capital formation may do little to promote an expansion or improvement of opportunities. For many students, the realities of the present system consist of more, and more costly, years of education, which provide for many neither the desired market success nor the benefits of a system designed to be more needs-supportive and inherently rewarding. Owing in part to the abysmal quality of information provided to secondary school students about their prospects of success, only one in five remain on the high-status career path they intended seven years after completion of high school. The rest are saddled with onerous debt and

limited opportunities.¹⁰ An integrated hierarchical system in which the job of schools is to send everyone on to college might do a better job of informing students about their life prospects, but it is a system which gives schools no incentive to counsel students to forgo wasting their money and time on pursuing a college degree and career that is probably beyond their reach. The ideal of equal opportunity invites schools to encourage whatever dreams students may have, leaving it to the world to pass judgment on, and mostly crush, those dreams some years on. To enable students to better assess their ambitions without robbing them of hope, schools must facilitate informed consideration of alternatives that are attractive and realistic. Because this would occur in school, before students reach “the age of reason” and are recognized as having moral and legal standing to choose an occupation for themselves, many would see this as a violation of EO. It would also require schools that are very different from those in the U.S. currently, and that are much more serious about preparing students to qualify for more than college admissions.

OVERCOMING MONOPOLY CREDENTIALISM

In a system in which *differentiated* high school diplomas retain socio-economic exchange value outside the educational system, opportunity would not require safe passage through the single bottleneck toward which all students in the U.S. are funneled, namely college. If occupational organizations themselves played suitable roles in the governance of occupational education, certification, and their coordination with general education, so as to ensure the labor market value of high school credentials, Mann’s vision of a universal free secondary education that would end the domination of capital and servility of labor might be substantially fulfilled. A partnership of labor and employer associations in overseeing occupational training and certification could be far more conducive to creating distinct, meaningful pathways to employment and responsible adulthood. This would require the establishment of educational spaces that are not dominated by academic cultural values and that would not compete for higher status by embracing the liberal studies and research that are valued by academic culture. An aspect of educational opportunities organized in this way is that the system of colleges and universities could not *monopolize* occupationally meaningful credentialing in the way it now does in the U.S.

This describes some basic features of the German educational system, in which nearly two-thirds of students pursue secondary vocational education through either a “dual system” of apprenticeships and high school education, or employment-based training. Historian Hal Hansen writes that:

While Americans look to college to secure a future for their children in the absence of a meaningful secondary certification system, Germans established hundreds of relatively attractive, legally regulated, skilled professions – not mere jobs – and organized an effective, highly standardized system for preparing the young for them at the secondary level. It trains not only bakers, hairdressers, auto mechanics, and machinists, but bankers, accountants, information technologists, engineers, librarians, and archivists – occupations Americans associate with higher education.¹¹

Committees of the Federal Institute of Vocational Education (*Bundesinstitut für Berufsbildung*) establish the training standards for 350 distinct occupations, and these committees give equal representation to employer associations, labor unions, the

federal government, and states.¹² Standards are set high and are regularly updated along with occupational profiles, to ensure they retain meaningful relationships to the occupations that students seek. This “system of semipublic self-government” or “parapublic” governance, as Hansen calls it, is the historical culmination of a progressive transformation of apprenticeship and craft guilds, and its effect is to assign public educational responsibilities to “private training firms.”¹³ Although students are guided along different paths in the differentiated secondary system, the decisions are not irrevocable and “vocational qualification is so attractive that twenty-eight percent of Germans with an academic degree (*Abitur*) enter the vocational system.”¹⁴ Unlike their U.S. counterparts, German students are provided with far more useful information about their prospects, they do not bear the enormous personal expense of taking years to realize that their aspirations are unrealistically inflated, and they are not forced to compete directly with everyone else in a single hierarchical system that focuses public resources and private rewards in its higher extremities. Their enculturation into rewarding adult roles begins years earlier, is less dominated by an amorphous and indulgent youth culture, and leaves fewer “lost in transition.”¹⁵ The German system is far less a winner-takes-all system than the U.S. system, and it has not suffered the credential inflation and system growth that the U.S. system has suffered.

RETHINKING OPPORTUNITY

The fundamental objection that advocates of the U.S. system have is that the German system does not allow everyone to compete for positions of every kind when they reach the threshold of self-determining adulthood – the end of high school more or less. It violates EO as Americans understand it, because it guides students along different educational and occupational paths well before the “age of reason.”

Yet it need not, and should not, deny children “open futures” and an associated form of EO. The reality of respecting children’s future autonomy before they have mature judgment is that adults shape children’s opportunities to learn what they might be good at, their impressions of what they can realistically hope for, what they admire, who they want to be like, and where they feel they belong. Schools have this shaping effect, whether they embrace it or not. The best they can realistically do – and ethically should do – is give students diverse starting points for developing interests, capabilities, and understanding of what they might do with their lives, and be attuned and responsive to their inclinations and talents.¹⁶

A system like the German one with this understanding of equal opportunity would arguably be far more just than the current U.S. system. Students would be guided toward occupational outcomes before the “age of reason,” but it is not clear that their participation in determining the course of their lives would be any less meaningfully self-determining than the choices students in the U.S. system make. What is ethically relevant is not raw powers of reason, which children possess in abundance, but qualities of judgment grounded in relevant experience, understanding, and virtues. Do students who reach the age of 18 having pursued only an academic college-preparatory curriculum have an abundance of *occupationally* relevant experience and knowledge? A system less dominated by academic subjects could better

inform students' judgment about their lives and come closer to providing them with open futures. It would reduce the monopolization of credentialing by a system of higher education, which, for all its merits, is not the place to provide – at students' expense – what many would have been happier to receive free in high school: occupational qualifications and meaningful workplace-based learning that provides a direct and enculturating path to good work. Such a system would also come much closer to fulfilling Mann's vision of a universal education that could overcome "the domination of capital and the servility of labor." High school would aim to provide everyone with a good civic and general education, and access to occupational certification, college admission, or potentially both. College capacity would be more closely related to the number and variety of seats required to meet social requirements and, in a non-credentialing division, to fulfill personal interest. College would remain an essential prerequisite for many highly remunerated occupations, but the equalization of opportunity should in that respect be pursued through policies designed to limit income and wealth inequality – policies that would in any case be essential to achieving a semblance of fair and equal opportunity.

1. Thomas Green, *Predicting the Behavior of the Educational System* (Syracuse, NY: Syracuse University Press, 1980), xiv-xv.

2. Influential functionalist theories include Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America* (New York: Basic Books, 1976); Pierre Bourdieu and Jean-Claude Passeron, *Reproduction: In Education, Society, and Culture* (Beverly Hills, CA: Sage Publications, 1977). For a critique of such theories, see David P. Baker, "Forward and Backward, Horizontal and Vertical: Transformation of Occupational Credentialing in the Schooled Society," *Research in Social Stratification and Mobility* 29 (2011): 5-29.

3. Related works from that era include Raymond Boudon, *Education, Opportunity, and Social Inequality* (New York: Wiley, 1974); Ronald Dore, *The Diploma Disease* (London: Allen and Unwin, 1976); Randall Collins, *The Credential Society* (New York: Academic Press, 1979).

4. See David Brown, *Degrees of Control: A Sociology of Educational Expansion and Occupational Credentialism* (New York: Teachers' College Press, 1995); Hal Hansen, "Rethinking Certification Theory and the Educational Development of the United States and Germany," *Research in Social Stratification and Mobility* 29 (2011): 31-55.

5. See C. O. David, *A History of the North Central Association of Colleges and Secondary Schools, 1895-1945* (Ann Arbor, MI: The NCACSS, 1945); Hugh Hawkins, *Banding Together: The Rise of National Associations in American Higher Education, 1887-1950* (Baltimore, MD: Johns Hopkins University Press, 1992).

6. Horace Mann, *Twelfth Annual Report*, in *The Republic and the School: Horace Mann on the Education of Free Men*, ed. Lawrence Cremin (New York: Teachers College Press, 1957), 85, 87.

7. Brown, *Degrees of Control*; Hansen, "Rethinking Certification Theory."

8. David Labaree, *How to Succeed in School Without Really Learning: The Credentials Race in American Education* (New Haven: Yale University Press, 1997), 50.

9. David Bills, *Sociology of Education and Work* (Malden, MA: Blackwell, 2004); David Baker, "The Educational Transformation of Work: Towards a New Synthesis," *Journal of Education and Work* 22 (2009): 163-193; David Baker, *The Schooled Society: The Educational Transformation of Global Culture* (Stanford, CA: Stanford University Press, 2014).

10. Xiaoling Shu and Margaret Mooney Marini, "Coming of Age in Changing Times: Occupational Aspirations of American Youth, 1966-1980," *Research in Social Stratification and Mobility* 26, no. 1 (2008): 29-55; Hansen, "Rethinking Certification Theory."

11. Hansen, "Rethinking Certification Theory," 48-49. For more on the German system and occupational training generally, see Alison Wolf, *Does Education Matter? Myths About Education and Economic Growth* (London: Penguin, 2002).

12. Hansen, "Rethinking Certification Theory," 34.
13. Hansen, "Rethinking Certification Theory," 34.
14. Hansen, "Rethinking Certification Theory," 50; citing M. Pilz, "Why *Abiturienten* do an Apprenticeship Before Going to University," *Oxford Review of Education* 35, no. 2: 187-204.
15. Christian Smith, *Lost in Transition: The Dark Side of Emerging Adulthood* (New York: Oxford University Press, 2011); Hansen, "Rethinking Certification Theory."
16. See Joel Feinberg, "The Child's Right to an Open Future," in *Philosophy of Education: An Anthology*, ed. Randall Curren (Oxford: Blackwell, 2007).