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High-Stakes Testing and the History of Graduation

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Abstract
An historical perspective on high-stakes testing suggests that tests required for high school graduation will have mixed results for the putative value of high school diplomas: (1) graduation requirements are likely to have indirect as well as direct effects on the likelihood of graduating; (2) the proliferation of different exit documents may dilute efforts to improve the education of *all* students; and (3) graduation requirements remain unlikely to disentangle the general cultural confusion in the U.S. about the purpose of secondary education and a high school diploma, especially confusion about whether the educational, exchange, or other value of a diploma is most important.

Introduction

With the ascension of George W. Bush to the presidency, the scripting of national education policy debates has become more predictable. In the first week of his term, Bush proposed the same set of policies he had advocated or tacitly supported while governor of Texas, including more reliance on standardized testing to judge schools and government support for private (including parochial) schooling. During the 2000 campaign, he touted Texas's reform record in education as evidence of his competence in education policy. However, the details of education policies focusing on testing have become murkier, not clearer, in individual states. One issue in which debate over high-stakes testing has not settled down has been in the area of graduation testing. In the past two years, the failure of a federal court case against the Texas graduation test requirements, the publication of one expert witness's research on Texas, and two RAND Corporation studies that analyzed test scores from Texas have increased academic and civil-rights scrutiny of high-stakes testing as a gatekeeper for high school graduation (*GI Forum v. Texas Education Agency*, 2000; Grissmer, Flanagan, Kawata, & Williamson, 2000; Haney, 2000; Klein, Hamilton, McCaffrey, & Stecher, 2000; National Research Council, 2001). Texas's state policies have passed judicial—but perhaps not broader—tests. Various other state education agencies have retreated from fast implementation schedules for higher-stakes tests, especially as high failure rates have attracted attention. Lisa Keegan, Arizona's former superintendent of schools, was notable in shifting her ground several times as parents questioned the validity of test results, especially their weak connection to what schools may have taught the tenth graders subject to the testing (Kossan, 2000) and to skills used by the workforce (Glass & Edholm, 2002).

The academic and legal debate over graduation tests may well seem like *deja vu* to those who remember implementation of minimum competency tests in the 1970s and early 1980s (*Debra P. v. Turlington*, 1981, 1983; Linn, 2000; Madaus, 1983; McDill, Natriello, & Pallas, 1985, 1986; Pullin, 1981; Salganik, 1985; Turlington, 1985). The "script," so to speak, is familiar. As was the case with minimum competency tests, advocates of graduation tests today argue that one must test potential students to ensure that a high school diploma "means something." As in the 1980s, others are concerned that graduation tests are a substantial barrier to education that encourages dropping out, with differential impacts on poor and minority children. As in the 1980s, whether existing data can be used to answer the empirical questions about the impact of graduation tests is doubtful. And, as in the 1980s, one major federal court case left the test requirement in a large state essentially intact.

To an historian, the debate over high-stakes graduation tests is a recent phenomenon that can only take place because the majority of teenagers graduate. The contemporary concern with the consequences of high-stakes testing on graduation could not have existed a century ago. Few students attended high school, graduation was not expected of teenagers, and although American utopian writer Edward Bellamy had coined the expression "to drop out" of school, it would not become the dominant form of describing those who leave school until the 1960s (Dorn, 1993; Dorn & Johanningmeier, 1999). In the past forty years—but not before—educational researchers and administrators have written about dropping out as a serious social problem. In the past few years, some have renewed debate about the equity concerns with high school graduation, specifically with high-stakes graduation tests (e.g., Haney, 2000; National Research Council, 2001). What is notable is the apparent contradiction between the putative national goal of increasing the likelihood of graduation, on the one hand, and the increasing high stakes of standardized testing as

the mechanism used for both student and school accountability in many states. This paradox has its roots in the history of high schools in the twentieth century and changing expectations for teenagers.

Three topics are important in tying together the history of high school graduation and contemporary high-stakes testing policies. First is the statistical evidence about broad trends in high school attendance and graduation, insofar as sociologists, demographers, and historians have gathered them. The likelihood of teenagers graduating from regular high school programs increased dramatically in the first two thirds of the century but has stabilized since. Second is a discussion about the proliferation of diplomas. Apart from the debate over the value of the GED, there has been little discussion not only on the growing differentiation of diplomas but also on how that differentiation fits into the larger history of secondary and higher education in the U.S.. Schools are, for better or worse, more prepared to make additional distinctions in programs and diplomas than they are to prepare most children for a single credential. Last is an analysis of how public policy discussion of dropping out reflects the relatively new expectation of graduation. That new norm is the latest form in which we place our expectations for schooling more broadly. Our assumption that schools should solve social problems has colored popular images of dropouts, continues to shape official dropout policies, and explains why the debate about dropping out has, historically, omitted key issues.

The history suggests several general conclusions about the relationship between high-stakes testing and graduation patterns. First is how dropping out may be larger as an indirect than as a direct effect of high-stakes testing. A complex web of influences shapes entrances into and exits out of school as well as engagement with learning. One of these factors known to historians of education is the reciprocal relationship between labor-market participation and school attendance, and it is this type of push-and-pull relationship that high-stakes testing may affect. If barriers to grade promotion result in a large group of students who are clearly unable to graduate from high school by 19 years of age (when the majority of their age peers have already graduated and left high school), other opportunities (primarily work) will beckon strongly.

The second reasonable conclusion from this history is that this proliferation in diplomas, whether at the secondary or tertiary level, may mask continuing inequalities in educational opportunity. There seem to be many opportunities to earn degrees in various ways, at various times in life. And, because of the high proportion of the population attending college *at some point* in life, one might claim that high school graduation is merely an intermediate step in formal schooling. It is, one might say, just on the way to something that has a larger payoff, in the same way that completing eighth grade has ceased to be meaningful for most students' long-term future. However, because the high school degree is still a prerequisite for more advanced formal schooling, one must still pay attention to it as a gateway for schooling in adulthood as well as direct labor-market consequences of raising barriers to high school graduation.

Third, the history of dropping out, both as demography and as a public policy concern, suggests the difficulty of disentangling key issues. Can the public intelligently discuss the potential values of a high-school diploma when North American society has conflated them for almost forty years? We have inherited a legacy of viewing dropping out primarily as a problem of human capital, ignoring the issue of credentialism; a problem of future dependency, diminishing the equity problem; and a problem of individual psychology, effacing the broader social factors which Rumberger (1987, 1995), among others, has

described over the years; and a problem whose solution is less important than establishing the "worth" of a credential, overlooking how the two are intimately bound together. Open public debate should honestly face the dilemmas of a popular education in a high-stakes testing environment, even if the barriers to such debate are massive (Cremin, 1989).

In part, we have difficulty distinguishing the relative importance of the education credential as an exchangeable result (for more schooling or better work), on the one hand, and the knowledge and skills a student can take from education to use directly, on the other. We have inherited, from the twentieth-century history of educational development and debate about schooling, an assumption that the value of a diploma is or should be synonymous with the knowledge and skills a student presumably gains from schooling. With the first concerns about dropping out as a social problem in the 1960s came statistical evidence about how much more graduates earn than dropouts (Dorn, 1996). The existence of alternative explanations—the potential for credentials to sort labor queues, for example, or preexisting advantages that correlated both with educational attainment and also adult labor-market success—remained obscure or invisible. Over the same century, institutions of secondary and higher education have invented more and more ways to differentiate education, either implicitly through tracking and the creation of selective institutions or explicitly through different degrees. The last fifteen years have witnessed an expansion in high-school exit documents, and whether this is a unique moment in the history of the diplomas as such, it fits into the historical pattern of differentiation to solve the pressures on schools as institutions. High schools and colleges have tried, over the past century, both to grant more access and also to gain the institutional rewards of restricting access to the most valued credentials. Their solution—differentiation—suggests how strongly our society pushes schools to achieve *both* ends, perhaps at the cost of clarity about the fundamental purposes of schooling.

Numbers

Researchers across social science disciplines have come to very similar conclusions about the pattern of earning high school diplomas over the past century. Though some of the details vary among the authors, there is general agreement about the following broad trends:

The Twentieth Century has witnessed...

- increased high school graduation rates over the first two-thirds of the twentieth century, and stabilization since;
- decreased racial/ethnic and gender gaps in graduation during general increasing graduation, but persisting racial gaps since;
- growth in alternative credentials in the past several decades, and different rates in earning alternative credentials by various population groups; and
- persistent socioeconomic influences on graduation.

The crucial questions for determining the fairness of testing as a gatekeeper for academic diplomas revolve around why these patterns have developed and the theoretical potential for high-stakes tests to magnify continuing inequalities of educational opportunities. In particular, the reciprocal relationship between labor-market participation and school attendance is of particular note for how work may become more and more attractive as teenagers think of themselves as further away from high school graduation.

Broad Trends

At the beginning of the twentieth century, fewer than one of every ten adolescents graduated from high school. Today, roughly seven of every ten teens can expect to earn a diploma through a regular high school program (Goldin, 1999; Snyder & Hoffman, 2002). The increase, occurring in the first seven decades of the twentieth century, represents a dramatic change in the educational attainment of children in the United States. While elementary schooling was widespread in the nineteenth century, attendance was sporadic, and a minority attended (let alone graduated from) secondary schools. Today, formal schooling dominates children's daily lives as a part of growing up, and as a part of dominant beliefs about succeeding as adults. First, most children attend formal schools regularly, and as a result, schools circumscribe the lives and concerns of most families who schedule vacations with the school calendar in hand and who plan their daily lives around school schedules. Second, children attend school through most of their childhood. In contrast to the patterns of one hundred years ago, when children typically left formal schooling in their early teens, most children today attend school until they are legal adults. Third, schooling *as a route to economic and social success* has become part of the American belief in the existence of inequality without social classes (DeMott, 1990; Ossowski, 1963). Most children would agree, as would most adults, that a good education is a requirement for a good job. Few would have agreed with such a statement in 1890, even though elementary schooling had become an accepted, politically popular part of childhood in the nineteenth century (Katznelson & Weir, 1985). The expansion of secondary education has coincided with a growing rationale of schooling as a way to improve students' future job prospects (Kantor, 1983).

Figure 1 (which overlays data from three different sources by birth cohort (Note 1) illustrates both the broader trend and the two significant exceptions to this pattern of increasing graduation: the decrease in graduation at the end of World War II and the stability in graduation from regular high school programs over the past several decades. The ratio of high school graduates to 17-year-olds rose to 0.70 for the cohort born in 1943 (and graduating in 1960 or shortly afterwards), and has remained approximately at or above 0.70 since. But the ratio had **declined** from 0.51 for those born in 1925 to 0.43 for those born in 1927 and 0.47 for the 1929 cohort before returning to 0.53 for the 1931 cohort—corresponding to a dip in graduation between 1942 and 1948, the period when those cohorts would have reached 17 years of age (Goldin, 1999, p. 63). This pattern mirrored decreases in high school attendance during World War II (Snyder, 1993). Because the drop included females as well as males (though it was more precipitous for males), military service cannot entirely explain the temporary shift; teens left school primarily to work during the war (Goldin, 1998). More recently, the likelihood of graduating from regular high school programs—as opposed to alternative credentials such as through the General Educational Development (GED) test—has remained fairly stable (with a slight decrease) over the past three decades or more, in contrast to the prior dramatic increase. The self-reported graduation proportions (reported by the Census Bureau) are higher than ratio of diplomas to 17-year-olds, a series which has decreased slightly since the cohorts born in the mid-1950s.
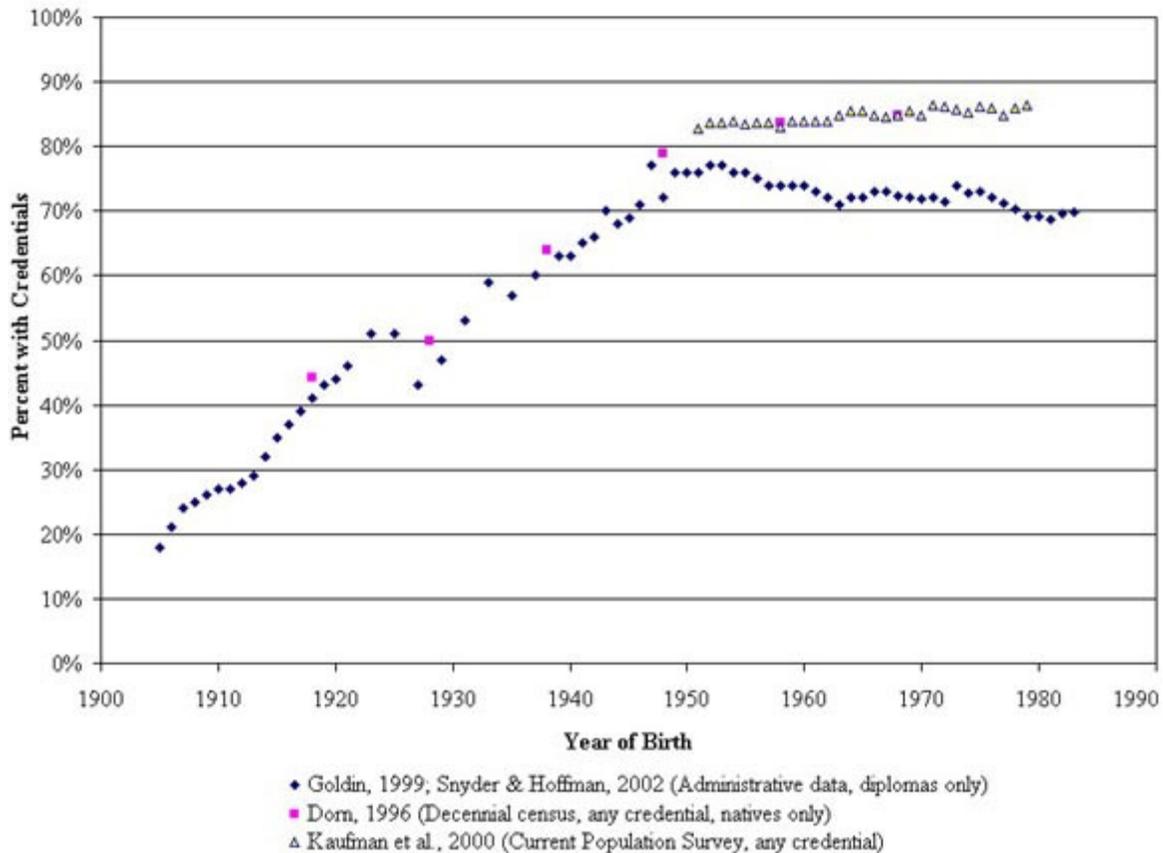
**Figure 1. Twentieth Century U.S. Graduation Rate
By Birth Cohort and Data Source**

(The data for Figure 1 may be downloaded in the form of an Excel worksheet.))

During the increase in graduation before those born in the 1950s, three types of gap in the likelihood of graduating shrank dramatically: by race, geographic region, and gender. According to Dorn (1996), the white-nonwhite difference in having high school credentials by 20-24 year olds shrank from a 34 percent absolute gap in 1940 to a 13 percent gap in 1980. Other research (Jaynes & Williams 1989; Kaufman, Alt, & Chapman, 2001) confirms the shrinking racial gap in high school graduation. Some of that difference early in the century came from the concentration of African Americans in the South before World War II. Goldin's data (1999) show that while whites in the Southern census divisions had better graduation rates than the regional population as a whole, Southern whites were still less likely to graduate than those from other regions through the mid-1950s. Multivariate analysis shows that both region and race became less important, in themselves, in determining who graduated by the last third of the century, but both had independent associations with the odds of graduating earlier (e.g., Dorn, 1996; Featherman & Hauser, 1976). The relative influence of gender has also dwindled. In 1910, 93,000 females graduated, as opposed to 64,000 males, almost a 3:2 ratio. As high school graduation became far more common, boys began to catch up with girls in basic educational attainment. In 1970, 1.46 million females graduated, in contrast to 1.43 million males. In 1991, for the first time since the federal government began collecting records on high school graduation, more males graduated than females (by an estimated 3,000 out of more than 1.2 million for each sex) (Goldin, 1999, pp. 63-64).

A racial gap persists in regular high school graduation, though, in terms of absolute percentages (Dorn, 1996; Kaufman et al., 2001). This gap parallels, to some extent, concerns about declines in the fortunes of African Americans in higher education in the 1980s (Jaynes & Williams, 1989). Given the greater likelihood of minority children being poor, perhaps one can explain this continuing gap as an indirect effect of persistent socioeconomic or social class effects on educational attainment. Some evidence, however, is more disturbing. While the influence of being African American on the odds of graduation by age 18 had disappeared by 1970 in my multivariate analysis of decennial censuses, the association reappeared in 1980 and 1990 for graduation by age 19 (Dorn, 1996, p. 20). I hypothesized that race had disappeared as a factor in the chances of *early* graduation after "socioeconomics/social class" is factored out, but that African Americans are still less likely, even in a multivariate analysis, to be regular high school graduates by the end of the ages that most youth attend high school. In other words, the proportion of African Americans who are slightly precocious academically (who would graduate before their eighteenth birthday), given their economic circumstances, is probably as high as the general population. Others, who may be less resilient, might be far more vulnerable to the combined effects of poverty and racism. Recent reports of racial differences in who earns regular diplomas as opposed to alternative credentials (primarily the GED) suggest some confirmation of this suggestion (Kaufman et al., 2000). Of those who earn some high school credential, white students are more likely than the general population to earn high school diplomas, while Latino/a and African American students are more likely to have alternative credentials.

These alternative credentials, primarily the GED, have grown dramatically in the last three decades both in terms of programs and also in terms of those who receive a diploma alternative. After 1970, when amendments to the Adult Education Act allowed federally-sponsored adult education activities to enroll minors and to lead to an alternative credential, growth snowballed to 294,000 GED recipients in 1974, 489,000 in 1981, and 516,000 in 1999. GED recipients represented 9 percent of young adults with high school credentials in the late 1990s (National Center for Education Statistics, 2001). Young white or Asian adults with high school credentials are more likely to have regular diplomas than young Latino/a or African American adults (Kaufman et al., 2000, p. 19). One can, of course, interpret this information in at least two ways. Maybe alternative credential programs have provided an avenue to an essential credential for disadvantaged teens that otherwise would not exist. Or maybe the growth in alternative credential programs has provided a safety valve for high schools, enabling them to slough off responsibility for poor students. The answer depends heavily on the relative value of alternative credential programs, a matter of substantial dispute (Boesel, Alsalam, & Smith, 1996; Cameron & Heckman, 1993; Murnane, Willett, & Tyler, 1999).

What is undisputed is the persistent association between socioeconomic or class status and the chances of attending and graduating from high school. The data sources vary from historical studies of local or state school systems (e.g., Kaestle & Vinovskis, 1980; Katz, Doucet, & Stern, 1982; Perlmann, 1988) to successive cross-sections of decennial censuses (Dorn, 1996) and other historical and contemporary studies (e.g., Ekstrom, Guertz, Pollack, & Rock, 1987; Featherman & Hauser, 1976; Mare, 1980, 1981; Natriello, Pallas, & McDill, 1987; Walters & Briggs, 1993). What is less certain are the influences of more family-specific factors. Historical sources generally agree with contemporary sources that having a parent or guardian with high educational attainment assists students

in graduating, and that having a large family is a disadvantage (e.g., Dorn, 1996). However, those data about family structure are generally available only for the past. Many of the potential factors considered in contemporary analyses, especially psychological and school-specific factors (e.g., Rumberger, 1987, 1995; Rumberger & Larson, 1998; Rumbert & Scott, 2000), simply do not have appropriate sources providing data across a wide span of time.

What is crucial to draw from this broad history is that the debate over high-stakes testing assumes that most students graduate, a fact that developed over the twentieth century. In the past wave of implementing tests (minimum competency tests, starting in the 1970s), most appeared to continue graduating after several chances. Unfortunately, most of the data sources that might resolve this historical question about minimum competency tests are insufficient. To my knowledge, no state-level officials have intentionally proposed high-stakes testing as a means to *reduce* the likelihood of graduating, though statements such as former President Clinton's (1999) about wanting to ensure that a high school graduate can read his or her diploma are quite common. The unexamined assumption is that, given a clear set of expectations, students and schools will put forth sufficient effort to meet them. Was variation in effort responsible for the patterns of graduation in the twentieth century?

Why Growth and then Stability?

The most persuasive explanations for the patterns in graduation are theories of reciprocal movements between labor markets and schools, incentives for school systems to increase attainment to some limit, and high school custodialism. These are certainly not mutually exclusive explanations, and they each present important insights into the twentieth-century dynamics of high school graduation. Theories that focus on changes in teen labor-markets or in the accepted mission of high schools, in particular, should be a warning to those who think that simple incentives in a school system will result in clearly predictable outcomes. Complex interactions among labor markets, public debate, and social beliefs about the value of education all are likely to interfere with any policy designed with a simple model of how to improve student achievement.

Labor market-school reciprocity

The labor-market demand explanations of graduation trends focus both on the mutual exclusivity of full-time work and schooling, on the one hand, and the expectations that education can improve job prospects, on the other. As the nineteenth century turned into the twentieth, teens could find employment in a variety of fields nationwide, and someone working full-time could not also be in school. At the same time, many teens (especially boys) could see no necessary, obvious reward to continued schooling beyond age 13 or 14. Most jobs did not require, either nominally or in fact, the skills that one would develop in high school. What changed over the next sixty years was both the widespread exclusion of teenagers from full-time work and also the growing belief that an education was the ticket to success in the United States. At first in industrial occupations and, later, in agriculture, both laws and alternative opportunities discouraged employers from hiring or keeping teens as full-time laborers (Osterman, 1980).

At the same time, schools began to have a concrete reward attached to staying *in* school. The new clerical and white-collar occupations in the twentieth century were different from

clerical work in the nineteenth, which was a putative stepping-stone to ownership of small companies or factories. The new division of work in the industrial era was part of a larger reorganization of businesses that concentrated the manipulation of information as well as people and things. It was the era of industrial monopoly and also of female typing pools (Chandler, 1977; Davies, 1982), and the conjunction was neither a coincidence nor inconsequential for education. With one or two years of additional attendance, especially in commercial courses, a teenager could markedly improve her or his opportunities for employment (Cohen, 1992; Kantor, 1982). One must be careful here not to overgeneralize. During the nineteenth century, the popularity of many urban high schools depended on the relative credential value of attendance (Labaree, 1988). However, the late nineteenth and early twentieth centuries witnessed the development of a new type of work, marked both by its non-manual nature and also by its wage status. With an incentive to improve one's marketable skills, teenagers in the twentieth century were more likely to attend—and thus graduate from—high schools (Goldin, 1998).

The labor-market explanation fits well with the three important features of graduation in the twentieth century. During most of the first seven decades of the century, full-time employment opportunities for teens declined, and both attendance and graduation increased at the same time. During World War II, both military service and a tight labor market encouraged teens to leave high school, temporarily reversing a decades long trend. More recently, over the past three decades, as teens have become more involved in part-time work, the mutually exclusive nature of work and school has dwindled (Greenberger & Steinberg, 1986). Perhaps some teens are less willing to believe in the long-term rewards of high school when they can earn what seems to them to be good money immediately (also see Fine, 1987). There is still a real value of diplomas in the labor market, which is the incentive for dropouts to earn GED (or other alternative) diplomas, but the relationship between the labor market and schools revolves as much around perceived rewards to and opportunity costs of schooling as the reality. The labor-market explanation is plausible, if one is willing to assume that schools' actions are largely irrelevant to the patterns of who attends and graduates.

Graduation as a reflection of system dynamics

Green (1980) and Seidman (1996) have claimed, in contrast to focusing on the historical changes in labor markets, that school systems have powerful incentives to encourage greater educational attainment, up to a limit. The dynamics of educational systems, they claimed, push inevitably for more attainment. Arguing from the characteristics of an abstract labor-market, Green claimed that the marginal value of diplomas would be greatest when neither too low nor too high a proportion of students earned it. Thus, he claimed, incentive for attainment would grow dramatically between the low and high proportions, when the presumed value is highest. As each level of attainment becomes relatively saturated, the educational system will differentiate existing credentials by reputation, focus more on achievement than on attainment, and create a new norm for the next level of attainment. The theoretical ratcheting up of attainment standards is similar to Freeman's (1976) argument about overeducation and credentialism. The strength of Green's theory, and Seidman's application to graduation specifically, is its ability to explain the long plateau of high school graduation at the end of the twentieth century in a way that coincided with growing expectations for college and the appearance of a "dropout problem" (Dorn, 1993, 1996). As a much higher proportion of the population now expect to attend college for some time in contrast with 1960, the relative value of a

high school diploma for most teenagers is as a stepping stone to college rather than an end in itself. In the meantime, Green asserted, high schools would be pressured to show more achievement for graduates (and less attention to merely graduating them), as the system shifts focus from attainment to differentiating by quality. .

This theory of internal systemic pressures has one primary weakness, the assumption that the educational system is the primary driver in educational attainment, generally without regard to changing labor-market conditions and changing views about the social mission of schools. Green describes his hypothesis about the benefits of an educational credential as a "tautological law" (Green, 1980, p. 94). The theory cannot explain the decline in graduation in the early 1940s, a matter which a reciprocal relationship between school and work explains with ease. In addition, the empirical claim of Green that the apparent advantages of attaining a diploma would be greatest when a moderate proportion of the population has attained it is inconsistent with evidence about relatively early advantages to high school attainment and a surprisingly high relative advantage in recent years (Boylan, 1993; Goldin, 1998). (Note 2) Green is, however, the most articulate proponent of the systematic explanation of broad trends in educational attainment, and his and Seidman's work reminds us that school systems have their own dynamics which will not always respond as desired to public policy.

Graduation as a reflection of high school custodialism

Others have suggested that a growing custodial mission for high schools is partly responsible for making graduation easier. Angus, Mirel, and Vinovskis (1988) pointed to education writings from the early twentieth century (Ayres, 1909; Thorndike, 1907) as prompting or marking a shift in public-school policies that encouraged schools' making work easier, de-emphasizing grade retention and academic coursework. Angus and Mirel (1999) argued, more comprehensively, that school officials deliberately crafted a custodial mission for secondary schools, in part out of lower expectations for the poorer students who were flooding high schools early in the century. They argued that the only way to change high schools' historical underestimation of adolescent ability to conduct academic work would be consequential tests tied to content standards. The custodial argument can explain both the general trends and also the dip in graduation during World War II. During most of the early twentieth century, this argument runs, the growing custodial mission of the schools cultivated a "shopping mall" institutional culture that made attendance and earning credits easier while discouraging hard work for the majority of students (Powell, Farrar, & Cohen, 1985). For a short time during World War II, keeping teens in school was less important than the war effort, but that change was temporary. Regular graduation statistics have remained on a plateau for the last few decades because the custodial mission concentrated on attendance, and graduation was an ancillary, if important, result for schools.

The custodial argument presumes a monolithic impulse to acquire and maintain enrollment for the legitimacy of the high school as an ideal of an institution. The custodial argument is weak where that impulse is clearly not monolithic. It cannot, by itself, explain the growth of alternative credentials over the past three decades. If the primary mission of high schools has successfully shifted from academics to custodialism, then there should be no path to a diploma reserved entirely for those *outside* regular attendance. Nor can the custodial argument explain why schools have regularly pushed out students (e.g., Fine, 1986, 1991), whom they should theoretically have an incentive to claim they successfully

educate.

Crucial questions

In each theory described above, complex dynamics have been at work in determining high school attendance and graduation. The questions one may ask about the potential influence of high-stakes tests on graduation revolve around the relationships among various forces:

- Do high school students facing high-stakes tests calculate opportunity costs of further education differently from students not facing high-stakes tests?
- To what extent might the decisions of students to continue school change depending on existing labor-force conditions?
- What incentives do school systems have, stemming from within as well as without, that will affect how they respond to students who fail high-stakes tests?
- Is there independent evidence apart from test results that high-stakes testing has altered the low academic expectations high schools have often set in the past century, as argued by Angus and Mirel (1999), Powell, Farrar, and Cohen (1985), and Sizer (1984)?

As argued earlier, these explanations are not necessarily mutually exclusive. While the labor-market explanations suggest a largely external force, the other two theories suggest largely internal dynamics or decisions that shape the opportunities available to teenagers. We need not choose among these explanations at the moment, for they do not explicitly conflict. (Whether fellow researchers may prefer one explanation over another should not preclude consideration of them for policy purposes.) Each provides useful questions to frame further exploration. In particular, the theory of reciprocal labor market-school movement suggests that the effect of high-stakes testing may be indirect. Even if graduation gateway tests do not directly prevent diplomas for many, promotional gates earlier in school may result in a higher proportion of 18-year-olds who are far away from graduation. Will they stay in school at the expense of current earnings, if they will need to stay in school until 20? Advocates of these promotional and graduation gates point out that promoting and graduating students without skills are hollow events, and I have had enough students in my college classes without useful skills to be sympathetic with that argument. The assumption, discussed below, is that the value of a diploma is equivalent to the value of the knowledge and skills one presumably learns in school. However, a teenager is usually not learning academic skills if she or he leaves school for work. Historically, self-education has been a difficult, if virtuous, activity (Kett, 1994).

Stratified Diplomas

In addition to examining the history of changing attendance and graduation, one must also note, in a history of graduation, how schools have invented new ways to make distinctions among those who attend an institution. A diploma, originally, was a way to establish a category for a relatively small portion of the small group who attended high schools in the nineteenth century: those who completed a program of studies. The early twentieth century witnessed the introduction of additional diffferentiation through tracking and separate, specialized high schools. More recently, states have created different types of diploma. All of the changes in the last century form part of a regular institutional repertoire of ways of compartmentalizing students when pressed to solve specific problems. One may

anticipate, based on this history, that all states may shortly invent new categories of diplomas for students who fail to meet exit exam requirements, if those numbers balloon, or that such students will be "cooled out" (see Clark, 1960) through non-academic exit routes.

For most of U.S. history, the meaning of a diploma was largely irrelevant to the value of education. The majority of those who attended higher education of any sort—colleges, academies, normal schools, grammar schools, and high schools—stayed briefly. Students and their families often found something of value in education even without the piece of paper documenting completion of a program of studies. For example, the vast majority of nineteenth-century students in Philadelphia's Central High School failed to earn a diploma. Despite this fact, high school attendance had become sufficiently attractive by the late nineteenth century to force Philadelphia's public schools to open more high schools (Labaree, 1988). So, too, those concerned about the inadequate education of children were more concerned with increasing experience (or what we might today call educational attainment) than with the acquisition of the diploma itself (Kett, 1995). Only in the 1960s (as described below) did the diploma become a sufficiently powerful expectation that its opposite, dropping out, commanded headline status as a social problem.

Even before the 1960s, though, the different potential goals for high school were creating an incentive to separate different groups of students in various ways. As Labaree (1988) explained with regard to Philadelphia, high schools were under pressure both to maintain the credential value of a high school education and also to open up access. The solution, reached in 1939 in Philadelphia, was a stratified set of high schools. Central High School was reborn as a selective high school open to students citywide through competitive admissions, with the other high schools as comprehensive high schools open to all in their attendance area. Many other large cities, such as New York, established similar, hierarchical organizations of schools. Some of the systems that did not have a Central High School or Bronx School of Science created vocational schools, which could serve to boost (or erode) the reputation of the other schools.

Differentiation through the establishment of high schools with unique programs and entrance criteria was one step beyond differentiation of students within high schools through tracking, which had developed earlier in the century (Angus & Mirel, 1999; Herbst, 1996; Krug, 1964). It was not a significant change in terms of how schools created separate expectations for different groups of students, though it was occasionally controversial locally, as in an attempt to create a separate vocational high school in Chicago early in the century (e.g., Katznelson & Weir, 1985). The creation of separate schools demonstrates, however, the way that public schools have been willing to create new programs in a flexible manner to respond to various pressures (Tyack & Cuban, 1995).

One consequence of this flexibility is that school systems have been willing to create programs for different levels of diplomas. In the last fifteen years, states across the country have created different official diplomas as well as an unofficial policy in some districts to steer students into GED programs. One recent report (Guy, Shin, Lee, & Thurlow, 1999) documented fifteen separate types of diploma in the fifty states and the District of Columbia (even after collapsing most diplomas into four basic categories). Three years ago, eight states had one type of exit document for high school students. Twelve states had some type of honors diploma, 35 had either "IEP" diplomas or certificates of attendance

(typically available only for students with disabilities), and thirteen states had additional, idiosyncratic types of exit document.

Administrative databases (such as the Common Core of Data) often do not make such fine distinctions among types of diploma when granted by a single institution (public high schools, in this case). The proliferation of diploma types, both granted by public schools directly and also as alternatives to high school diplomas, requires some study. There is a real danger that some students, unable to succeed in mandatory academic diploma exams, would be granted alternative credentials that others would see as "watered-down," either directly through school programs or by steering into GED programs. The history of high schools has been replete with sometimes ingenious ways that high schools have undermined efforts to raise academic expectations for what students can do, and while one would wish that schools would avoid differentiation, one must not be blind to their tendency to engage in precisely this type of response to public policy demands.

Some might suggest that high school diplomas have become less important in their role for more people as an intermediate step to higher education than as a terminal degree. However, the changes in higher education, while parallel to high school differentiation, actually reinforce the importance of the high school diploma in itself, as the mid twentieth-century sequencing of high school and college schooling has eroded. One would be viewing the history of education too narrowly if one did not acknowledge that the differentiation of the high school (in terms of curriculum, buildings, and diplomas) has paralleled the differentiation of higher education. Colleges and universities developed electives and majors a century ago. More recently, discussion of community-college and adult vocational programs has focused on the alleged need for more credentials, certificates, and degrees (Parnell, 1985; National Center on Education and the Economy, 1990). Even though the broad push for vocational certificate programs envisioned by early Clinton administration officials has largely disappeared, community colleges have taken up the call for certificate-like programs on their own. At the same time as community colleges and high schools are creating new types of exit document, the century-long sequencing of schooling has started to decay. High school students can enroll in both high school and college in many places. A high proportion of college students are older than 25. Many adolescents and adults exit from and reenter schooling several times. Diplomas, thus, are no longer primarily an *exit* document for students who are leaving formal schooling. Understanding the impact of high-stakes testing on graduation requires consideration, therefore, of both the immediate value of a diploma for graduates and also its use as a key to formal schooling later in life. The significance of high school graduation has not degraded to the point of eighth grade graduation (for some proportion still have a high school diploma as the highest educational credential they will receive), but some parallel remains: both are necessary to continued attendance at school.

There are two logical consequences that follow from this broader context. First, measuring educational attainment requires a life-course approach to measuring schooling, perhaps not as complex as a multi-state life table (e.g., Land & Hough, 1989), but one that accommodates the various stops and starts in formal schooling that were common in the nineteenth century and are becoming more common today. Second, high school completion is a step in educational attainment with multiple uses. Measuring only the impact of high-stakes testing in terms of income misses the way that graduation credentials are prerequisites for higher education. If a consequence of high-stakes testing is a lower probability of graduating from high school, then a long-term result might be a

lower probability of having access to quality higher education later in life.

Meaning

The recent debate over how standardized testing may affect graduation chances for students demonstrates how the social meaning of a diploma has changed over the past century. In 1900, high school graduation was rare, and the act of leaving school before attending high school or earning a diploma was an expected, if sometimes lamented, fact of life for most teenagers. If standardized testing had existed for graduating high school students then, probably very few would have been concerned about the potential effects on students. One hundred years later, those who leave school without a diploma are violating a normative expectation about what adolescents do (attend and graduate from high school), and many deem that violation sufficiently dangerous to society as a whole that the action has a special term—"dropping out"—and often earns public-policy scrutiny. In part, we worry about dropouts for economic reasons, though there is considerable debate about the extent to which a diploma represents additional human capital rather than the competitive value of a credential in a labor queue (e.g., Becker, 1964; Berg, 1970; Dore, 1976).

Those in the U.S. have worried about dropping out as a social problem, for the popular image of a high school dropout is of an adult without a viable future, an emblem of dependence (Dorn, 1996). Throughout the last century, educators and others have occasionally argued for public-policy remedies to the act of leaving school, and beginning in the 1960s, the "dropout problem" became the focal point of deliberate, well-publicized institutional efforts. Those debates have affected the larger patterns of attendance and graduation very little, however. The fact that specialized programs other than the GED have not seemed to affect the larger trends suggests that public-policy discussion of dropping out has been ineffective. The greatest expansion in the rights of students to attend or continue attending schools came in the 1970s, long after the height of the first wave of headlines over dropping out and generally unconnected to it. Too often, public policy discussion of dropping out is disconnected from the larger patterns of school system behavior. One should thus be wary of narrow interpretations of the graduation-test question that may omit crucial features of schools. In particular, the proliferation of diploma types, in addition to the act of leaving school, is a crucial new feature of secondary education in the U.S. that deserves attention.

The Recent Norm of Graduation

Debate about dropping out in the past four decades reflects the relatively new expectation of graduation for teenagers. Impossible before most adolescents attended high school for several years, this expectation bloomed during the 1960s into a public, headline-grabbing discussion about why we should be concerned about dropping out and what schools might do to solve the problem. Two aspects about the development of graduation as a norm (or expectation) are important to the discussion at this workshop. First, graduation is an *age-related* norm, part of the historical growth in age consciousness that has paralleled the development of retirement and other "stages of life" that did not exist in public awareness two centuries ago (Chudacoff, 1989; Graebner, 1980; Haber, 1983; Kett, 1977). Because traditional high school programs serve teenagers, and because most adult education programs for dropouts focus on the GED as a goal, in most cases only teenagers can meet that norm of graduation. Also, graduation statistics that focus on the teen years most

appropriately measure the extent to which high schools meet that norm.

In addition to expecting graduation as a part of adolescence, many in the U.S. also expect graduation to solve many potential problems facing both individual teenagers and society in general. Many argue for attention to dropping out because high school graduates earn more, are less likely to be in jail, are less likely to have children out of wedlock, and so forth. As sociologist Lucius Cervantes asserted more than three decades ago, today's dropouts would be the "gangsters, hoodlums, drug addicted, government-dependent-prone, irresponsible and illegitimate parents of tomorrow" (Cervantes, 1965, p. 197). The dropout literature in the 1960s married the tangible economic penalties of dropping out (higher unemployment and lower income) with the assumption that dropouts were psychologically weak, delinquency prone males to create a stereotype of dropouts as those who would, in the future, be dependent on society (Dorn, 1993, 1996).

The 1960s were certainly not the first time that either educators or school critics were concerned about how students attended or left school, nor was it the first decade when anyone claimed that schools should address a multitude of social problems. Educators and social critics have claimed, at various times since the establishment of English colonies in North America that schools should train future leaders, assimilate immigrants, discourage immorality among the poor, prevent class conflict, inculcate nationalistic values, and improve the character of workers, to name some of the goals. However, for most of U.S. history, sporadic attendance—not leaving school before acquiring a diploma—has been the target of reformers' efforts (Kaestle, 1983; Tropea, 1987). Even when some have been concerned about how much educational experience a child has received (as opposed to its consistency), the goal has been general educational attainment rather than the specific target of high school graduation (Kett, 1995).

What was new in the 1960s was the link between older beliefs about the value of schools, on the one hand, and the new expectation of graduation, on the other. Symbolizing this link was a word that, before the 1960s, had been one of several ways that educators talked about those who left school before high school graduation. Student withdrawals and early school leavers were certainly the topics of debate from 1900 through the late 1950s. In the past four decades, however, those who discussed student attrition have generally used one word, *dropout* (or variants of it), to name the problem. Dropping out has become the inverse of graduation, representing individual and social danger and growing directly from our new expectation that teenagers graduate from high school. The second national educational goal, 90 percent high school graduation (however measured), culminates a sea change in how we as a society have been concerned about attendance. The creation of an expectation for graduation was predictable once the majority of teens began graduating (also see Green, 1980). However, the form that the expectation took and the cultural rationale for it were not. As a society, we have chosen to be concerned about dropping out as a cause of adult dependence. Thus, many warnings about the long-term consequences of barriers to graduation today take the form of social results like crime and unemployment. Raising a discussion focused on alternative concerns (such as equity) is difficult. And, in general, disentangling all the issues is harder because we have a legacy of public debate that has conflated them. (Labaree, (1997)

Ineffective Public Policy

Deliberate public policy efforts to reduce dropping out have suffered from limits in scope, contradictions in the purposes of high schools, the prevailing stereotypes about dropouts, and a persistent belief in the power of public relations. One needs to be cautious about generalizations because dropout policies vary by local district and also by government level (district, state, and federal). Local circumstances have shaped most dropout programs, even where funds flow from above. However, one must contrast the pronouncements regularly made about dropout prevention with the relative stability in regular high school graduation over the past few decades (the time when we have described school attrition as *dropping out*). While an individual program may well have helped teenagers in it (and many programs certainly have), dropout prevention programs have, together, not changed the nationwide patterns of graduating and leaving school. The obvious question is, why have programs had such little effect overall?

The obvious answer—but an important one—is that dropout prevention programs have generally been small, focusing on a few students or dropouts at a time. They are *programs* rather than *changes in schools*. Tyack and Cuban (1995) argue that schools have, historically, been far more willing to adopt small, incremental changes than large ones. A school system can more easily approve one, two, or ten small dropout prevention programs than it can change prevailing expectations teachers and principals may have about students. New York City's public schools, which had the most programs explicitly labeled "dropout prevention" in the 1960s, never planned (even at the beginning of the War on Poverty) to serve more than a fraction of adolescent dropouts (Dorn, 1996, p. 88). Dropout prevention efforts are, while sometimes different in character from the earliest ones, still not very different in scope. They still involve counseling, still have difficulties with funding, and still are on the edges of school systems' organizations (Dynarski & Gleason, 1998). School systems like New York City often eliminated dropout prevention efforts when outside funding dried up in the later 1960s, and one can still hear similar tales today. Systematic dropout prevention is not a high priority for most local school systems.

One reason why dropout prevention is not a priority is that it contradicts an abiding incentive for public school systems to restrict credentials. Even if one disagrees with Green's (1980) and Seidman's (1996) argument about the limits of educational credentials, there is a long history of high schools being rewarded for either restricting all high school credentials or stratifying them and restricting the most valued ones (Labaree, 1988). As discussed in the **Diplomas** section above, public school systems have created selective-admission high schools and programs, and these features of the system often generate the most positive news for public schools. Public high schools thus have contradictory missions, attempting both to educate all adolescents and also to provide the highest rewards to a limited few. As part of that structure and the rhetoric of meritocracy in North American society in general (Lemann, 1999), many teachers and principals believe deeply in schooling as a meritocratic system. The administrator who told Fine (1986, 1991) that low-performing or troubling students were "hijackers" of his school was not alone. Many educators simply do not want to educate everyone. Even the most well-meaning teachers often resort to a form of educational triage, trying to save a few children while tolerating the failure of others (e.g., Michie, 1999; Sapon-Shevin, 1993; Sizer, 1984).

In addition to being small and fighting competing goals for public schools, the broad

assumption of psychological problems of potential and real dropouts has encouraged programs that focus on remedying individual defects rather than addressing needs more broadly. Consistent with the common belief that dropouts were budding juvenile delinquents on the way to unemployment with little thought of their futures, many early dropout programs featured either individual counseling (to solve personal adjustment issues) or work experience programs (to increase the chances of employment later) (Dorn, 1996). I know of no dropout program in the 1960s that addressed concrete needs in a narrow fashion, such as providing day care services for students with children. Even now, providing day care is an exception rather than the norm as part of dropout prevention strategies (see Orr, 1987, for a smorgasbord approach to dropout prevention). Focusing on student deficits is certainly not unique either to dropout prevention or to the United States; critics of special education or other at-risk programs often point out deficit orientation, and the former Soviet Union had an Institute on Defectology (see Vygotsky, 1993, for the casual use of the word, akin to the English "handicapped"). The deficit focus of dropout prevention has had two consequences, one practical and one political. The practical consequence of a deficit orientation is that such programs may not solve the problems dropouts have that are outside their control (such as poverty, inadequate public transportation, or school-caused problems). The political consequence of a deficit orientation is that such programs have few lasting constituencies that can fight for their long-term survival , as Cuban (1992) describes is necessary for the longevity of school reform efforts (Dorn, 1996).

Lastly, nationally visible dropout prevention efforts have consistently assumed the persuasive powers of public relations, following a pattern that dates back to before dropping out became a headline issue. The two World Wars, the 1950s, 1963, and the early 1990s all witnessed national public-relations efforts (generally through public-private partnerships) to convince dropouts to return to school or students to remain in school. Four of the five efforts went by the same name: the "Stay in School" campaign (Angus, 1965; Dorn, 1996). None had a documented meaningful effect, because public relations efforts could not significantly change the reasons why most dropouts would leave school. In particular, the push and pull influences described above have generally gone unmentioned in public policy debate. The assumption that public relations alone can change broad demographic patterns is simplistic.

Limits on Public Policy Debate

Consistent with the limits of explicit dropout prevention and remediation efforts have been limits on public policy debate. We do not always talk about practices that are responsible for more attrition than small programs can ever compensate for. The first wave of explicit dropout programs in the 1960s demonstrated this type of omission. Despite arguments about the importance of eliminating dropping out, neither schools nor their critics suggested changing three crucial policies that encouraged dropping out: the exclusion of students with disabilities from schools, the regular separation of pregnant teenagers from schools, and widespread suspension and expulsion without due process. Challenges to all of those practices succeeded in the 1970s, well after the initial peak of concern over dropping out and by using a civil-rights argument rather than highlighting the social costs of under-education (Dorn, 1996). While discussion in the 1980s was more likely to focus on the civil-rights dimensions of student attrition, public policy discussion still has revolved around the perceived link between dropping out and dependency. Even liberals like California Rep. George Miller have justified federal aid in a way that 1960s

writers on the dropout problem would have recognized:

> Without a high school education, few will be able to compete in the new, high-technology centered labor market. Dropout prevention programs are essential to securing family self-sufficiency and to prevent the cycle from starting over again with a new generation of children. (Miller, 1987, p. H3901-2)

Discussion of dropping out as an equity concern has certainly existed in the last fifteen years, but it has not dominated public debate (Dorn, 1996). The history suggests that the shadow of dependency will tend to dominate discussion of dropping out. Those trying to persuade the public to pay attention will emphasize the social costs of dropping out, echoing the last 35 years of writings and speeches on dropping out. In trying to get attention, these appeals to fears about dependency can easily drown other ways of framing dropping out.

Shifting Tensions

The tensions described here, between broadening educational access and restricting credentials, have shifted in the past forty years from its roots in schools as institutions to broader political debate. In 1960, many of those who had doubts about the wisdom of graduating everyone would have been older educators born before 1920, who had gone to school when only a minority graduated from high school. The changes in law in the 1970s limiting the ability of schools to exclude students, as well as the stable proportion (a large majority) who do graduate from high school, have been in place now for more than a quarter of a century. Most educators today grew up when graduation was a norm and have been professionals, for the most part, during a time when schools have had to open their doors to all children. Today, the institutional tension in the mission of high schools remains. However, I see far more tension in public debate than in schools as organizations. Policymakers simultaneously call for 90 percent graduation (in the second national goal) and an end to social promotion. Advocates of high-stakes testing argue that testing with consequences will provide motivation for teachers and students to work hard and thus accomplish universal high-quality education. The push for high-stakes testing is, in part, a consequence of that shift to broader political discussion about schooling in a national debate. Many states have taken this road to what seems, to this historian, a holy grail of testing (Goldstein, 1997). The motivation of many is admirable; however, introspection about the dilemmas of schooling is largely absent.

Lessons and Perspectives

The history of graduation, diplomas, and concerns about dropping out in the last century provides a guide, if not to the future, at least to some plausible issues of concern in the discussion of graduation in an era of high-stakes testing. These concerns mirror those of the National Research Council's (2001) Committee on Educational Excellence and Testing Equity. There is a real possibility that increased use of high-stakes testing will decrease in some measurable amount the likelihood of teens graduating from regular high school programs in the U.S. in general. The recent stability in the regular high school graduation rate is evidence that graduation does not always increase, and the decline at the end of the World War II is evidence that it can decrease under certain circumstances. One could imagine, plausibly, that the direct and indirect effects of high-stakes tests might result in a

lower likelihood of teens' graduating with academic diplomas. In addition, the recent proliferation of high school credentials, together with the history of high school differentiation, should raise the empirical question of "*which* diploma earned" to a high priority in any research tracking the consequences of high-stakes testing. Finally, the small size of most dropout programs historically and the blind spots in public discussion of dropping out should warn anyone against the belief that a few band-aid programs might easily staunch a large flow of teenagers heading through school doors. These issues raised by the history described here do not predict whether high-stakes tests will restore some presumed value of the diploma or increase the likelihood of student attrition. They should, however, help frame further discussion and research.

Moreover, the long tangled history of diplomas and the different possible values of a high school degree suggests that we must be very clear when discussing the rationale for high-stakes tests. Diplomas have an exchange value, either in a labor market or to gain entry to another school, and that exchange value may not be directly related to the purpose of a degree requirement. On what basis are states withholding a standard academic diploma from students who do not meet certain examination requirements? Having the diploma for its exchange value is important to most students, and so one must balance the property interest in a diploma (as the *Debra P.* case described it) against the eventual purpose of the degree requirement. When is threatening a student's access to the exchange value of a diploma a justifiable policy? Consider the following potential goals of any requirement:

- Improving the education of the student directly;
- Improving the exchange value of the diploma for the student (perhaps by increasing its credibility immediately with employers or colleges);
- Certifying concrete skills or knowledge in an educational program for society (where a degree requirement is tied to the specific program);
- Certifying the general intellectual worth of graduates for society (where a degree requirement is not tied to a specific program);
- Improving the status of a school or schools (through the credibility of a degree's inherent worth or through restricting credentials);
- Improving the exchange value of the diploma for future students (by increasing its credibility in the long term); and
- Using the pressure from current failures to encourage schools to improve in the future.

I have ordered these seven goals from the most immediate to the most distant in relationship to the students. In the first two goals, there are alleged direct benefits to the student, either in the use value of a diploma (the learning) or in the exchange value of the diploma. In the third and fourth goals, with social benefits, the student may gain indirectly. The last three goals use the student as a means, in essence, to others' ends, with little foreseeable benefit to the students in question. One may evaluate some of these goals in terms of ethics. I would, for example, disapprove of policies where the goal uses current students primarily as pawns. Other goals, such as the first two, are amenable to empirical exploration. The third goal is most common in professional preparation programs, where the state has a clear interest in skilled graduates of medical schools, colleges of education, and the like, and where one might directly evaluate the relevance of specific requirements.

The hardest goal to weigh against the property interest in a diploma is certifying graduates as educated *in toto*. General education requirements, whether they are courses or exams,

are always proxies for evaluating whether a student is sufficiently skilled or intellectual to have earned the title "graduate." The risk in either type of requirement is that passing a course or exam might be, at best, a poor substitute for being a well-educated graduate. If one can narrow the goal of graduation gateway testing to this general certification, though, one can examine the merits of the proxy relationship more clearly. Would the expectations be reasonable (or a healthy intellectual stretch) for a well-educated adult today? Do the exams measure what adults value in a well-educated neighbor? Do all students have a clear opportunity to learn the skills and knowledge by the end of a phase-in period?

We rarely discuss this proxy relationship in a straightforward manner because of the social and political baggage that the high school diploma has acquired over more than a century. We assume, all too often, that the skills and knowledge learned before, the exchange value of, and the social benefits of diplomas are identical. As high school graduation has become common, and as dropping out has acquired the connotation of dependency, we have focused many of our anxieties about a changing world on teenagers and a piece of paper that most—but not all—acquire. This historian believes firmly that disentangling all these social meanings of diplomas would help us analyze the potential consequences of high-stakes tests for teenagers, the meaning of those consequences, and how to explain this analysis to a country that is desperate for a diploma with some recognized meaning.

Notes

1. The series of the diploma-to-17-year-old-population ratio mixes data from Goldin (1999) with more recent and updated information from the U.S. Department of Education (Snyder & Hoffman, 2001). Since teenagers are now more likely to graduate at age 18 than in most of the twentieth century, that ratio based on the 17-year-old population will underestimate graduation when the 17-year-old population is larger than the 18-year-old population and will overestimate graduation when the 18-year-old population is larger. In neither will the differences be meaningful in terms of the long-term trends described here, though the measure is not a true event-exposure rate or a probability (in the same way that the infant mortality rate is not a true event-exposure rate but nonetheless is a rough measure of mortality conditions at the beginning of life). The interval spans for both the Dorn (1996) and Kaufman et al. (2001) series are mapped back to the birth cohort of the mid-point of the range: The 18-24-year-old graduation rate reported for 2000 by Kaufman et al. is mapped back to the birth year of those age 21, or 1979. It is, in effect, a step to smooth the estimate. As Goldin (1998) noted, adults exaggerate when self-reporting education. The census in 1940 experienced far more evident exaggeration (when compared to graduation statistics Goldin gathered) than more recently, so the growing spread between the self-reported figures and the diploma-to-17-year-old population ratio in the past few decades is not likely to be a result of *increased* exaggeration by those surveyed.

2. Green (1980) and Seidman (1996) have argued that the standard assumption of a relative advantage of educational attainment (comparing having a degree to not having it) ignores the way that creeping attainment in a cohort make the relevant comparison the mean proportion of the cohort. As a higher proportion of a cohort have a degree, the relative advantage of having a diploma (compared to the **rest** of one's cohort) disappears, and the more visible issue becomes the penalty of missing that diploma (relative to the cohort as a whole). Whether such a distinction is meaningful in economic terms is an open question, but the socially-perceived advantages and penalties, however, **are** often in

comparison with relative norms. In that regard, Green and Seidman are substantially correct: high school graduation has become more commonly a stepping-stone to college since 1965, especially for children of wealthier families, while dropping out is now universally perceived as a serious impediment to economic success for adults.

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