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POLICY RESEARCH

The second learning objective is to encourage policy researchers and students of policy research to: *Examine relationships between actual changes in programs and funding in relation to intended and unintended outcomes.* Too frequently, policy research focuses on simple relationships. Consider the assumption that need-based aid improves access. When federal programs such as Pell are cut, then gaps in enrollment opportunity emerged (St. John, 2003; see also part I). Clearly, changes in federal and state student aid influence changes in outcomes, so it is crucial to build understanding of the consequences of change in programs into policy studies and the ways that research is interpreted, as we have argued.

This chapter addresses strategies for situating policy research studies and summative policy reports in contexts of the sweeping waves of political and ideological changes that reshape education. While we focus on policies in relation to college preparation, access, and success, the importance of situating policy scholarship in the crosscurrents of the politics of education, our primary topic, has broader implications. We encourage readers to think about emerging inequalities as a first step, and then focus on ways that assuming *universal* effects and systemic linkages limits the capacity of researchers to illuminate effects of program and funding changes. We also encourage engaged researchers to build partnerships with activists in government agencies and community organizations that share commitments to promoting education equity and social justice.

DISCERNING EMERGING INEQUALITIES

Understanding of the evolution of policy studies from a systems approach using grand theories to micro-studies of policy issues can help illuminate how a universal logic is still entrenched in policy research. To inform the interpretive process in literature reviews and design of policy studies, we examine the history of education policy studies in relation to the demise of grand social theory. Taking these steps provides visibility into the continuing role systemic logics play in policy research.

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Evolution of Policy Studies

Policy studies emerged in the 1970s, and government agencies and researchers adapted to the breakdown of systems theory in program planning and budgeting (e.g., Schultz, 1968), a method long criticized by Charles Lindblom—originator of the concepts of muddling through (1959, 1979) and incrementalism (Braybrooke & Lindblom, 1963). Aaron Wildavsky (1969) argued to salvage policy analysis as a tool embedded in the planning, programming, and budgeting systems (PPBS)—the systems approach—used to plan the federal K–12 and higher education programs enacted in the 1960s. Explicit use of systems logic in policy analysis gave way to new arguments for programs, or advocacy. Lindblom argued that such research provided the means of speaking to the political power embedded in budgeting and legislative processes, and he proposed using social research for political advocacy (Lindblom & Cohen, 1979).

Systems Approach: The older systems logics were adapted in research alliances used for policy advocacy. Indeed, arguments for separating policy analysis from systems logics preceded the extreme fragmentation of scholarship on K–12 and higher education policy and practice that followed (Chapter 12). The breakdown in systemic thought about policy (e.g., formula funding, student aid, etc.) set the stage for the narrowed scope of policy studies in recent decades. During this more recent period, new paradigm-specific logics developed in the field of higher education as studies of college access, persistence, college choice, and academic preparation emerged.¹ Thus, education scholars contributed to this deconstruction of systematic approaches to reform, but not on the same scale as did the abandonment of policy logics, which was evident in many policy studies at the time, as discussed in Part I.

Reshaping Policy Studies: The rationales underlying the shift in educational policy used evidence from policy studies in making arguments. These arguments for change were based on raising the quality of education for all (improving outcomes), replacing older arguments about the right to basic education (state role), and the national interest in equalizing opportunity (federal role). The policy papers and reports used to craft the new policy trajectory used research, developed mostly through informal alliances between funders (government agencies and foundations) and researchers in private corporations (i.e., policy research firms) and universities. The basic arguments used to rationalize this were:

1. Reemphasizing educational quality in liberal arts education as a foundation for higher education, rather than focusing on social progress by promoting equal educational opportunity (e.g., Bennett, 1984; Bloom, 1987; U.S. Department of Education, 1983).
2. Using testing and accountability to monitor education outcomes instead of adequately funding education to ensure quality rather than focusing on gaps in family resources among diverse student groups (e.g., Bennett, 1986, 1987; Finn, 1988a, 1988b, 1990a).

These rationales used appeals to diverse populations about how their rights to education as a core aspect of neo liberalism emerging at the time, but the shift away from providing adequate funding and promoting equal opportunity at a high cost for educational equity (Chapter 12). These twists of logic explicitly ignored the decline in funding for need-based grants and compensatory education uplifting low-income families (St. John, 1994b, 2003, 2013), a practice that became common in education for low-income students undermined equity in college opportunity. As indicated in our reviews, policy studies (reviews in Part I). The rationalizations did not logically consider how policies linked to outcomes.

Discerning Program and Funding Links to Emerging Inequality

Given this policy shift, it is increasingly necessary to re-emphasize equity, especially the ways that new programs relate to social and economic inequalities, as part of the context for policy studies. A major flaw in neoliberal education policy was that by ignoring context, analysts tacitly accepted neoconservative arguments about government waste, tax reductions, and funding cuts. We used the following steps in our analysis of the changes in federal policy (Part I):

1. Examined trends in policy and outcome, considering both equity and equality related to educational outcomes and the quality of those outcomes used to recraft policy.
2. Analyzed how changes in policies (programs and features of programs) and funding levels related to changes in both quality- and equity-related outcomes.
3. Considered how research informed interpretation of these results.

Using this process provided a basis for moving forward. In the epilogues to Parts I and II, we updated the basic analyses, confirming that this approach has helped reveal emerging inequalities. However, there are some limitations to this approach that merit attention in future efforts to conduct policy studies and craft policy reports using research evidence, as we highlight in our discussion of quantitative studies and contributions of qualitative scholarship. We discuss recent developments in both types of research, as they inform both researchers developing policy studies and analysts crafting policy arguments.

Understanding the logical connections between programs (features and funding) with outcomes is essential in discerning whether evidence actually supports claims, a process that is important in both building sound policy rationales and in testing whether claims made as part of policy advocacy actually hold up in practice. We consider how both quantitative and qualitative evidence can be used to test the validity of claims.

DESIGN AND INTERPRETATION OF POLICY STUDIES

While the new rationales predominate, illustrated by the research on college preparation review in Part I, too little attention is given to developing and preserving mechanisms (programs and funding) that reduce inequalities that emerge and increase in spite of monitoring and narrow studies of links between courses completed and achievement.

When the design of the program and the sources of funding are ignored, it is difficult to discern implications for deliberations on either program features or sources of funding. Research can be detrimental to social progress when researchers fail to consider these factors and linkage structures in designing projects. Even random experiments, the current focus in the educational policy environment (programs affecting the subjects and funding levels), must attend to the logics linking funding and program features to educational outcomes if the authors hope to draw reasonable policy implications from their scholarship. Otherwise, scholars run the risk of misinforming policy on matters related to social equity.

The legacy of systems logic continues to be embedded in economic analyses of student aid and programs that combine social support with modest amounts of aid. At the same time, despite evidence of inequitable access to 4-year colleges, researchers who study student support programs often do not examine the effects of changes in funding and program eligibility on gaps in student outcomes. While some programs have combined

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student academic support with financial aid, such as Indiana's 21st Century Scholars Programs (Chapter 9), the erosion of features promoting equity have been ignored by researchers seeking to advance methods (e.g., Toutkoushian, Hossler, DesJardins, McCall, & Canche, 2015). If programs and funding remained constant, then the universal assumption might hold, but when programs change in ways to reduce opportunity, it is essential that researchers document these links.

Contending with Systems Bias and the Assumption of Universal Price Response

The new emphasis on causal methods and the fragmentation of research has created the tendency of analysts to write simplistic advocacy papers extrapolating from the findings. As discussed previously (Part I), the statistical errors in the U. S. Department of Education studies of attainment (e.g., Adelman, 1999; Berkner & Chavez, 1997; Choy, 2002a, 2002b; Pelavin & Kane, 1988, 1990) are well documented (Becker, 2004; Heller, 2004), but remedying the methods without dealing with the fragmented logics adds to problems in research design and interpretation.

The reviews of the NCES access and attainment studies were used to advocate for experimental designs that allow for causal methods that include financial aid as a variable affecting enrollment (e.g., Becker, 2004; Heller, 2004), and this type of research has been reemphasized over the past decade. As progress is made in causal studies, it is especially important to consider how policies (e.g., eligibility), program features (i.e., starting and ending dates), and funding levels vary over time and how different groups respond to these changes. We use two examples of newer methods to illustrate how study designs can contend with or obfuscate embedded bias.

Research Exposing Emerging Inequalities: There have been some excellent publications using powerful methods to examine how new programs impact enrollment and reduce inequality. We use examples from research on state scholarship programs to illustrate how emerging quasi-experimental methods have helped to illuminate inequalities.

One line of logic has been that merit scholarships will substantially expand enrollment rates. Extending the systems logic about student aid, Bishop (2002, 2004) argued that the Michigan model would double enrollment if expanded nationally. Yet, it was clear from evidence about the merit awards that high schools enrolling most of the African Americans in the state did not have the curriculum needed to even qualify to take the exams necessary to be considered for the scholarships (St. John & Chung, 2004). Further, as the Michigan case illustrates (Chapter 10), even with subsequent changes to upgrade the curriculum available in high schools serving minorities, the gaps in opportunity have widened, and Michigan has lagged behind other states. The merit program examined by Bishop (2002, 2004) and the subsequent version implemented in 2006 were eliminated, and enrollments in Michigan never came close to doubling as Bishop had predicted. Compared to need-based grants that go to low-income students who would otherwise be unable to pay for college, most merit scholarship aid goes to students who would enroll anyway (Heller & Marin, 2004).

Cornwell and Mustard (2002) were among early researchers to address the racial inequalities associated with implementation of merit scholarships in Georgia's HOPE Scholarship program. Dynarksi's (2000, 2002b, 2002c, 2004) research on the Georgia HOPE Scholarship stands out as exemplary in method *and* consideration of diverse groups. She found positive effects on retention of high-achieving students in state (i.e., enrollment in Georgia colleges), but uncovered increased inequalities that accelerated

stratification, specifically for African American students. Her work both addressed inequality and advanced statistical methods in the field (i.e., difference in differences).

However, the studies of Georgia HOPE do not overcome the limitation of generalizing from a single population, even when rigorous experimental and quasi-experimental designs are used. Several states have replicated the model (Doyle, 2006), but adopting an innovation per se does not mean the same effects will be seen. Subsequent findings of a multi-level study of state merit programs on student persistence that considered states at one level and students at another indicate that Georgia was an exception because of the size of the grants (Chen & St. John, 2011).

Certainly, advancing statistical methods is important to the field, but the presentation and interpretation of the research can be problematic when researchers do not account for changes in the programs over time. Unfortunately, many of the researchers advancing these new statistical methods don't consider these programmatic changes or the population differences over time or within groups.

Research Ignoring Changes in Program Features and Funding. A recent article on the enrollment effects of Indiana's 21st Century Scholars (TFCS) program concluded, "The TFCS program has a relatively small effect on whether students go to college and where they enroll. We then used alternative statistical approaches to reduce the bias due to self-selection into the TFCS program. Although the estimated program effects after accounting for self-selection were larger than in the earlier models, they were still notably smaller than reported in prior studies of the program." (Toutkoushian et al., 2015). The article appropriately referenced a policy report that did not adequately discuss selection bias.

The Toutkoushian study had referenced only one policy report, *Meeting the Access Challenge: Indiana's Twenty-First Century Scholars Program* (St. John, Musoba, Simmons, & Chung, 2002). Policy reports tend to overlook limitations, a problem that has appropriately received attention in recent years (Becker, 2004; Heller, 2004). As was typical of policy studies conducted by the Indiana Education Policy Center during the period, the paper was also reviewed for publication in an academic journal, and the publication acknowledge but did not solve the selection bias problem (i.e., St. John, Musoba, Simmons, Chung, & Peng, 2004). In addition, subsequent studies has substantially extended and refined scholarship on TFC (e.g., Lumina, 2008; St. John, Hu, & Fisher, 2011). Reference to these later studies would have made it easier for the authors to consider the policy relevance of their study.

Self-selection into programs like TFCS or the use of services provided by a program are forms of selection bias that should be expected. Finding there were measurable "selection effects" can inform policy development, if researchers consider how selection action happened in the original programs and changed overtime. This require moving past the implicit assumption about universal price response. The ways these scholars compared populations did not consider program changes over time: the two populations were subject to different award levels, support services, and requirement for funding for TFCS changed over time, rendering the universal-effect assumption useless. By far, the more import issue was to examine the effects of changing program features over time, but at the very least researchers should show critical thought about what measurable selection effects actually mean.

Even more problematically, the article overlooked changes in selection for the 21st Century Scholars program that should have been considered when measuring effects

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of selection. For example, the TFCS added a requirement that to receive awards, students would have to complete the college preparatory curriculum rather than the general diploma (still an option for students), which is a more restrictive selection criterion increasing measurable selection effects. A reasonable person would consider how the tighter selection criteria affected students' decisions to enroll in the program, given that a pathway—general diploma as entry to technical programs in community college—had been eliminated. The actual monetary gains from program participation were always small for public-college students (current tuition minus prior year tuition), a problem that primarily affected public 4-year colleges. Private colleges could use current-year tuition and students received substantially higher awards. The primary finding of the early studies was not the overall gains in access, but the marginal effects of participating in the program on uplifting into community college (a very basic form of access) and enrollment in private colleges, a redistributive effect noted in the original study. Subsequent research ignored by the Toutkousian study team had also revealed that participation in the services provided by the 21st Century Scholars program (Lumina, 2008; St. John, Hu, & Fisher, 2011), another form of self-selection contributing to their measurement of selection bias. The facts that features of the programs became more restrictive and that local services were reduced as cost-savings measures were also not considered. These attempts to cut cost by the state had eliminated program features that had been positively associated with enrollment by students who had used the services (e.g., homework support and counseling from a local support center).

These limitations rendered the Toutkousian study virtually useless for policy purposes. After completing the study and presenting their findings, the authors learned that the Indiana Commission for Higher Education (ICHE) had cut funding by changing eligibility. Don Hossler, a co-author with Toutkousian, noted: "When I met with the ICHE Commissioner and outlined the results of this work (which we had to do per our agreement in getting the data), she was pretty uninterested because they had already changed the scholars program and students must now have a B average to get the award, so our study was no longer relevant."² The failure to consider the policy context had created serious problems, focusing attention of small direct effects after selection rather than considering policy relevance of selection effects and changes in program effects attributable to changes in the program and funding.

The TFCS program can only really be understood as part of the larger state context that includes a mix of program features that can change over time, coupled with modest funding on top of what students would receive without participating in the program. A few policy-relevant questions that could have been addressed had the researchers documented program features and funding in the current program (i.e., the current year study) include:

1. *How do features of the program, including selection criteria and student use of services relate to measure selection effects?* This basic question about program features and how they link to selection and measurable effects was not considered.
2. *What are the effects of the modest addition for TFCS compared to Pell eligible students who did not apply?* This question has actually been addressed in prior studies (St. John et al., 2011).
3. *What are the relative effects of large grant top-off awards at private colleges compared to modest supplemental awards at public colleges?* This is an issue addressed by all

prior studies but ignored in the analysis of selection effects. Earlier studies had found more-substantial effects at private colleges where monetary awards were larger than for public colleges.

In addition, the authors could have easily compared cohorts across time using consistent models, an approach that reveals the effects of program and funding changes over time. Had this approach been used, questions such as the following could have been addressed:

4. *Did selection effects change after implementing new requirements (i.e., required Core 40 curriculum and higher GPA)?* The new criteria would limit awards to individuals more likely to enroll and complete college without the programs.
5. *Did the reduction of the cap grant for 4-year university students reduce degree attainment by college-qualified students?* The failure to consider how the TFCS award amount declined relative to price was a missed opportunity to explore implication of loss in attainment attributable cuts in funding.
6. *Did changes in program features (e.g., increase GPA and course requirements) reduce the impact of TFCS on enrollment in public 2-year colleges?* Implementation of TFCS corresponded with creation of the public 2-year college system in the state, which had an impact on basic access. Typical students enrolling in 2-year colleges (i.e., low grades and less than a preparatory curriculum) would not have been eligible after the programs changes.

When policy analysts uncritically advocate neoliberal reforms without consideration of the inequality crises in education finance and fail to apply critical thought in their analysis, they overlook systemic biases that fuel Trump's new nationalism (Epilogue 1).

Various statistical methods could be used to address these policy-relevant questions, including (and perhaps especially) the econometric statistical procedures used in the Toutkousian study. Unfortunately, when research doesn't give thought to policy questions as part of the study design, they are literally unprepared to address the policy implications, as was noted by a co-author of this study (see Hossler's comment above). Clearly, it is critical that researchers focusing on advancing methods should also consider program features and funding levels for any programs studied.

Recognizing the Limitations of Methods in Policy Studies

Advancing statistical methods in policy research remains a crucial issue, especially in matters related to inequalities emerging from system changes. It is possible to use newer statistical methods with an awareness of changes in programs, policies, and funding. Unfortunately, there is also a tendency of policy studies using econometric methods, the most generally accepted method used today, to overlook policy changes over time. The attempts to generalize from one time period to another is one serious manifestation of the problem, but not the only one.

It is also crucial to consider embedded bias—the roles of ideologies and holdover systems logics—when crafting summative policy papers. When policy analysts uncritically advocate neoliberal reforms without consideration of the inequality crises in education finance and fail to apply critical thought in their analysis, they overlook systemic biases that fuel the new nationalism.

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MOVING FORWARD

In this century, public policy has emerged as a content specialization in many graduate programs in the field of higher education. Early policy studies in the field grew out of sociology, political science, and economics, disciplines dominated by grand theories rather than situational issues related to radical changes in policy, as has been evident in recent decades.

During the mid-20th century, these disciplines used grand theories that were conceptually well aligned with systems approaches to policy, many of which migrated from defense policies during World War II to education and social policy, a process that flourished during the Kennedy, Johnson, and Nixon administrations. In the late 1970s, critics of systems logics argued there was a need to rescue policy analysis from such programmatic approaches. At the same time, the Carter administration advanced Zero-Based Budgeting and used analytics methods that departed from the mainstream. In the early 1980s, the Reagan administration accelerated the change process by combining new policy rationales with studies that essentially abandoned the use of grant theory. The fragmentation of policy studies in K–12 and higher education is but one result of this transition.

While the political ideologies used to argue for changes in existing programs, including funding changes, have morphed in recent decades, there has been more limited change in the underlying systems logics used in policy studies, especially econometric studies. Policy studies have advanced deconstruction of selection effects—self-selection into schools, colleges, and programs along with institutional uses of eligibility criteria—from other measurable effects of programs and funding. However, given the holdover of systems logic in policy studies, many analysts have attempted to examine program effects without considering program features and funding levels. This is unfortunate, because policy knowledge and expertise is lost in the process. A central challenge facing policy researchers, along with analysts who draw from research to construct reports rationalizing policy positions, is to build understanding of how changes in programs and funding influence outcomes. This problem has been exacerbated by shifts to market-based programs that rely on student choice, introducing more self-selection. It is increasingly difficult for analysts and researchers to discern the differences in effects attributable to changes in the features of programs—selection and services—from monetary effects.

We conclude with a few questions to encourage critical thinking about research designs for and interpretation of policy studies in K–12 and higher education (Text Box 13.1). The next chapter focuses on the ways globalization alters contexts for interpreting policy studies.

Text Box 13.1 Questions about Design and Interpretation of Policy Studies

Study Design

1. How should researchers incorporate context into policy studies as a part of study design? Consider the role of change in program features and funding over time.
2. How have historical studies contributed to knowledge about changes in public policies (programs, program features, and funding)? How can they inform researchers about shifts in political ideologies influencing K–12 and higher education?