In this article, I argue that key characteristics of educational knowledge both constrain and enable the work of educational researchers, as producers of this knowledge, in distinctive ways. Educational knowledge is soft (vs. hard), applied (vs. pure), and provides use values (vs. exchange values). As a result, knowledge production in education is organized in a manner that is structurally egalitarian and substantively divergent. Some consequences of this are negative: For example, educational researchers find themselves unable to speak authoritatively about their field and feel pressure to imitate unproductive forms of intellectual practice. Other consequences are positive: For example, they have the potential for speaking to a wide audience and for participating in a relatively open and unregulated mode of scholarly production.

Educational Researcher, Vol. 27, No. 8, pp. 4–12

**Educational Researchers:**
**Living With a Lesser Form of Knowledge**

DAVID F. LABARTEE

Education schools make easy targets. This is especially true in the United States, where education-school bash-
ing has been a favorite sport for a wide range of partic-


pants over a long period of time. There are a number of

characteristics of this institution that make it vulnerable to

attack. Its origins are seen to be lowly (the 19th-century

normal school), as is the social standing of its primary client-

ele (disproportionately drawn from the ranks of women and

the working class), and it prepares students for one of the

lesser professions. Its curriculum and academic standards

are generally considered weak and its faculty and students

less able than their counterparts elsewhere in the university.

All of these elements make the education school easy to

pick on and difficult to defend. My aim in this article, how-

ever, is not to explore these familiar components of the

education-school saga but to analyze the role of one partic-

ular element that has received less scrutiny than the others.

The focus here will be on the kind of knowledge that edu-

cation schools produce and the impact of this kind of

knowledge, for better or worse, on the character of their

institutional effort and the public perception of this effort.

In speaking of the knowledge they produce, I mean the body

c of scholarly work that is generated by researchers within

educational schools—as distinct from the knowledge about

teaching practice that experienced teachers have and that

education schools may or may not transmit to prospective

teachers. The issue under study, in short, is research knowl-
edge rather than practitioner knowledge.

My argument is this: The nature of education as a field of

study leads to a form of research production that both con-

strains and enables educational researchers in distinctive

ways. On one hand, the result is (for example) that these

researchers find themselves unable to speak authoritatively

about their field and feel pressure to imitate unproductive

forces of intellectual practice. At the same time, they enjoy a

number of advantages over researchers in contrasting

fields, including a potential for speaking to a wider lay au-

dience and for participating in a more egalitarian structure

of scholarly production.

In what follows, I first examine the nature of the knowl-

dge produced by educational researchers and compare it

with other forms of knowledge generated within the uni-

versity. Then I consider the implications of these forms of

knowledge production for the ways in which educational

and other researchers organize themselves to carry out their

work. Next, I review a series of ways in which the nature of

research-based educational knowledge and its organiza-
tional form produce consequences that are negative for ed-

ucation schools. Finally, I review some of the ways in which

these same characteristics produce consequences that are

positive for education schools.

**The Kinds of Knowledge Produced by Education Schools**

Tony Becher has written a richly suggestive book about the

nature of the knowledge produced by the different acade-
mic disciplines and departments within the British and

American university. In this work—with the wonderfully

effective title Academic Tribes and Territories (Becher, 1989)—he considers the impact of these knowledge differ-

ences on both the nature of the intellectual work carried on

by academic practitioners and the form of organization em-

ployed to sustain this work. He starts, with a familiar pair of

distinctions—between hard and soft knowledge and be-

tween pure and applied knowledge—and builds his analy-
is from there. He focuses on the contrasting approaches to

knowledge production in research departments and other

professional schools only in passing, his argument provides

beautifully insights into many of the most familiar and

significant characteristics of educational research.

**Hard Versus Soft Knowledge**

Disciplines seen as producing hard knowledge are those

that are most successful in establishing the rhetorical claim

that the research findings are verifiable, definitive, and nu-
mulative. The natural sciences are the leading examples in

this arena. Practitioners in the natural sciences have devel-

oped scientific methodologies, procedures, and verification

rules that allow them to produce findings that can be repro-

duced by others, defended against challenges, and thereby

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gradually validated to the point where the claims come to be accepted as definitive—seen as an accurate depiction of "what we know" about a particular component of the natural world. Once this kind of finding is established as functionally definitive, at least temporarily, within a scientific discourse community, then others can build on it, pushing the pursuit of knowledge in that field to the next level.

Disciplines that produce soft knowledge, by contrast, find themselves working an intellectual terrain that is considerably less clearly defined. The humanities and most of the social sciences are the leading examples of this kind of intellectual endeavor. Research practitioners in these areas present forms of inquiry in which it is much more difficult to establish findings that are reproducible and whose validity can be successfully defended against challenges by others. Establishing causal claims is particularly difficult in these fields, as the producers of soft knowledge necessarily focus the bulk of their attention on the problems of description and interpretation: how to portray and make sense of the tests or events under study in the absence of clear decision rules and validating methodologies. And practitioners in these fields often have the luxury of being able to build on a solid foundation of previous findings because these findings are always subject to challenge by researchers who adopt a different interpretive approach. As a result, producers of soft knowledge find themselves constantly re-building the foundations of their disciplines as they continually reinterpret the most fundamental issues in their fields.

I am not arguing that hard knowledge is foundational and soft knowledge is not, only that hard knowledge producers are in a stronger position rhetorically to make the claim that their work is definitive and therefore cumulative. After all, interpretation and report are irreducible components of all inquiry. The claims of hard science are limited by community norms and purposes, and they are subject to revision and rejection by future researchers whose community norms and purposes are different (Kuhn, 1970). As a result, the validity claims of the hard disciplines are still, at least, difficult to contest but still contestable, durable in the short term but vulnerable over time. The advantage of hard over soft knowledge may be short-lived and largely rhetorical, but that doesn't make it any less substantial for practical purposes in the context for contemporary credibility.

Two characteristics in particular make it difficult for researchers in soft knowledge fields to establish durable and cumulative causal claims. One is that, unlike workers in hard knowledge fields, they must generally deal with some aspect of human behavior. This means that cause only becomes effective through the medium of willful human action, which introduces a large and usually error-term into any predictive equation. These billiard balls are likely to change direction between the cue ball and the corner pocket. The other is that most projects in behavioral fields have been embedded within them the values and the purposes not only of the researchers (like hard fields) but also of the actors under study. The result is a messy interaction of the researcher and the research subject.

From this perspective, education emerges as the softest of these fields. Curricula and the content of teaching and learning, curriculum and governance, educational organization and educational reform—all of these rest efforts by researchers to establish causal claims about them that are verifiable, definitive, and cumulative in any like the way that researchers in hard-knowledge disciplines can accomplish these things. For one thing, education is the social product of actors—teachers, students, administrations, parents, and policymakers—whose actions both shape this institution and are shaped by it. In addition, educational processes are fundamentally political, reflecting social purposes such as democratic equality, social efficiency, and individual opportunity—that embed contradictory pressures within education and provide conflicting criteria for evaluating educational successes (Cabrera, 1997, 1997b). As a result, educational researchers are able at best to make tentative and highly contingent claims that are difficult to sustain in the face of alternative claims by other researchers. In spite of these difficulties, educational researchers have not sought to eliminate the ethical and methodological obstacles to knowledge batten. Like knowledge producers in other fields that are grounded in human behavior, they have sought to establish ways of conceptualizing educational processes (such as behaviorism) and methodologies for analyzing these processes (such as statistics) that promise to enhance the claims they can make for the validity and reliability of the resulting educational knowledge. Within limits, this effort has been quite successful. An empirical science of education emerged at the start of the 20th century and grew into a position of dominance in the field within a few decades, and it is still a strong presence in spite of the recent rise to prominence of an explicitly interpretive approach to educational research (Shulman, 1986). The science of education, however, has encountered severe limitations for its claim to produce hard knowledge. It has been much more successful at describing the ways that education works and identifying those relationships between educational variables that at explaining educational outcomes in light of educational cause. These limitations have confined educational number crunching to the soft side of the knowledge spectrum because the importance of the hard sciences is expressed most distinctively in the ability to predict the effects arising from particular causes. But the only causal claims educational research can make are constrained by a mass of qualifying clauses, which show that these claims are only valid within the artificial restrictions of a particular experimental setting or the complex peculiarities of a particular natural context. Why? Because the impact of curriculum or teaching or learning is often indirect because it relies on the cooperation of teachers and students whose individual goals, urges, and capacities play a large and more or less direct role in shaping the outcome. And at the same time, education as an area of inquiry is more a public policy field than an intellectual discipline, whose central issues are irreducibly normative—to improve education and whose research practitioners are less united by a common technical orientation than they are divided by the different educational goals they espouse (Dewey, 1985, Tolman, 1972).

As a result, despite their best efforts, there is little that researchers can do to construct a knowledge on the foundations of the work of others. Within a particular research group (defined by shared values and interpretive approaches), it is possible to converge on a consensus of knowledge through a short-term effort of intellectual accumulation, but these huts are seen as structurally unsound by researchers who do not share the values and in—
terpretive approaches of those within that group's intellectual compound.

Pure Versus Applied Knowledge

Disciplines that produce pure knowledge are primarily oriented around the construction of theory. Practitioners in these fields work in a terrain that is abstracted from particular contexts, focusing on establishing claims of a more universal and generalizable sort than one could make if trapped within a local setting. There is an echo here of Robert Merton's distinction between cosmopolitans and locals, which is grounded in the scope of the cultural group to which people with preferences belong (Merton, 1968). In this sense, pure knowledge researchers are the cosmopolitans of intellectual inquiry, seeking to gain distance from the human scene in order to establish a larger pattern that is hidden in the clutter of detail within the close-up view. Much of the work in the natural sciences fits this domain, but the latter also encompasses the most theoretical work that goes on in a wide range of disciplines, from philosophy to sociology and from literary criticism to mathematics.

Disciplines that produce applied knowledge, in contrast, focus primarily on the practical issues that arise from specific contexts. The aim here is not to establish general patterns but to solve particular problems. Success is measured in relatively modest ways, according to whether or not a particular approach works in a particular setting better than alternatives that are available at the time in question. Professional schools in general have an applied orientation to knowledge and so do a wide array of disciplines—e.g., geology, psychology, and English—where they focus their attention on problem-solving more than theory-building.

From this perspective, educational knowledge production is overwhelmingly applied in character. For one thing, as noted above, education is not a discipline in the sense that cultural anthropology and physics are—defined by a distinctive theoretical perspective for viewing the world (culture and motion) and a distinctive research methodology (fieldwork and time-lapse observation). Instead, it is a public policy field focusing on a particular institutional sector. As a result, educational researchers are under pressure to focus their intellectual energies on the most vexing problems that arise within their institutional purview, rather than enjoying the intellectual freedom of pure knowledge researchers who can follow the chain of thought embedded within their own intellectual constructs. And for educational researchers, confinement to the educational arena is combined with necessity of following a normative mandate in exploring this arena. It is not enough to study what is interesting about education; the researcher is under pressure to improve it. Fields like education are sites of public policy, which means they are shaped by public goals for this sector of society and are responsive in part to the powerful consequences of this institution—for good or ill—in the lives of children and the health of society (Dionne, 1985; Teddies, 1972). Students and teachers learning what they need to know, race and gender skewed educational outcomes, teach- ers are not being adequately prepared, school resources are not equally distributed—these are the kinds of context-based and time-sensitive problems of practice that dictate the direction taken by researchers in the relentlessly applied field of education.

Exchange Value Versus Use Value

In addition to the hard-core and pure-applied distinctions, there is another difference, not mentioned by Becker, that divides university researchers from each other based on the way in which they view their role. The combined effects of the various fields affects the value of the education that a particular department or program provides to its students. On one hand, a university education can be a source of exchange value by giving them a credential that can then be exchanged for something that is intrinsically valuable to the student, such as a good job and a nice standard of living. From this perspective, the cost of the curriculum they pursue and the actual learning that they accomplish at the university is less important than the reputation of the university (or the program within it) and the perception of its worth among employers and others in the community. On the other hand, university education can provide students with use value by giving them a set of skills and an accumulation of knowledge that will prove useful to them in carrying out their varied roles in later life. From this perspective, the content of the knowledge acquired is the most important element of the educational process, quite independent of the university’s (or program's) reputation.

Consider how this plays out in a high school setting, where the upper curriculum tracks provide abstract academic knowledge that can be exchanged for college admission and eventually a well-paid job (high use value, high exchange value), whereas the lower tracks provide vocational knowledge that can be exchanged for a lower-level job (high use value, low exchange value).

A distinctive characteristic of the knowledge produced by educational researchers and the education offered by high schools is that they have low exchange value and high use value. Education is marketed by the various institutions that undermine its ability to provide credentials with high exchange value—for example, an association with women, the lower classes, public employment, and a "semi-profession," along with its weak academic standards and modest institutional origins. In addition, the broadly confirmed general perception of both the research and instructional programs of education schools is that they are weak, which further undercuts their exchange value. In part, this is because of the hierarchy within academic knowledge pursuits, which dictates that hard knowledge production outranks soft and pure knowledge production (although more likely is a somewhat located firmly at the bottom of both of these rank orders).

Of course, the high use value of the knowledge in a field is not necessarily a threat to the prestige of that field. Medicine is an applied field whose knowledge provides high use value for its graduates, while at the same time occupying an extraordinarily high status within the university. Likewise, a number of hard pure fields with high social standing, such as mathematics or biochemistry, gain status when their efforts lead to useful social applications, such as computers and genetic testing. The key seems to be that high exchange value and hard knowledge together immunize a field from the potentially demeasuring perception of being "merely useful." Medical schools are inextricably linked with the highest paid and most prestigious professions in the American occupational status order, and the demonstrable effectiveness of the hard knowledge they produce reinforces this elevated status. As a result, the exchange value they offer is
unnecessary. But education schools are bonded to one of the more lowly paid and more ordinary professions (closer to nurses than doctors in the professional hierarchy), and the visible weakness of their soft knowledge base to produce predictable and durable educational outcomes only reinforces this subordinate position. Curved with weak exchange value, education schools are doubly cursed by having to justify themselves only on the basis of the use value of the knowledge they produce, even though that knowledge is not very useful! As we will see below, the strong association between education and social status has consequences that are both negative and positive for the field.

**Organizational Consequences**

Becher (1989) argues that the kind of knowledge that provides the central intellectual focus for a discipline or an area within a discipline brings with it its own distinctive form of organization. Hard pure knowledge production calls for a social organization of intellectual practice that he calls "arbitrary and convergent." The nature of hard knowledge is that, for practical purposes in a particular intellectual context, it can be treated as cumulative. This means that at a given stage in the development of a discipline, everyone is focused on solving the same intellectual problems. The intellectual structure has been raised to a particular level, and all of the thought workers are clustered at that level. The result is that the work takes on a distinctly urban feel. At the same time, this intellectual convergence makes for a social structure that is quite hierarchical. It takes novices a long time to learn the full body of knowledge, and they only rarely get to the point where the definitive knowledge ends and the real work of intellectual inquiry begins. This means that senior people occupy a highly authoritative position because only they can direct the work at the very edge of understanding. It also means that the field needs to develop its own formal rules and ways of each field going within itself, one that necessarily assumes the reader or listener is informed about all of the issues that are already resolved. As a result, we must pay a fair amount of attention to the interesting material at the top of the structure of knowledge without having to bring the nonexpert up to speed.

By contrast, soft applied knowledge production calls for a social organization of intellectual practice that Becher calls "rural and divergent." Researchers cannot build towers on the foundations laid by others because these foundations are always being reconstructed. As a result, this research work is spread thinly over a wide area as individuals and groups continually work at reworking the most basic issues in the field and as they each pursue their own interpretive approaches. The resulting terrain is laid out in a series of rural dwellings and hamlets rather than in the kind of urban high rises erected by researchers in a field like physics. Novices in this setting find themselves indented quickly because the field is wide open and no issues are considered closed off from reconsideration. Senior people have less control over the work of intellectual production because their own work is so easily subject to challenge. And the field is less turned on itself because its boundaries are permeable, its body of knowledge nonscientific, and its discourse diffused among a variety of divergent research communities.

The organization of knowledge production within education schools fits the pattern of other soft applied fields by being thoroughly rural and divergent. Intellectual work within this field is spread all over the terrain. Researchers feel free to charge off in all different directions without a great deal of concern about what stage the development of the field has attained at the moment or what directions senior scholars want to see the field. They constantly re-examine old questions and reconstruct existing theories. Whole courses develop—for example, around teacher preparation in one place and subject matter standards in another—are the result of practical needs generated from within the institution of education or from society's concerns about the state of this institution rather than from the internal logic of the research effort itself. And these needs and concerns are so numerous at any given time and so likely to change with changing conditions that they provide only temporary and limited incentives to concentrate resources in the classic urban manner that characterizes the hard pure realm.

Gary Rhoades (1990) provides an insightful and influential analysis of the organizational peculiarities of American colleges of education, which makes particular sense in light of the preceding discussion about the kind of knowledge that is produced in these institutions. One assertion he makes about these institutions is the following:

"Colleges of education are marked by greater technological ambiguity and more resource dependency on well-organized, vocal constituencies in an environment in flux than are colleges of letters and science. As a result, colleges of education have more diversified organizational structures across colleges and are more unstable both within themselves and in their relationship to letters and science colleges. (Rhoades, 1990, p. 197)"

Another assertion is this: Colleges of education faculty are more likely than letters and science faculty to expect and accede to managerial control and are also more divided and thus less likely than letters and science faculty to assert influence, forming coalitions to defend and advance the collective interests of the college faculty. Thus, education faculty have potentially more impact than letters and science deans. (Rhoades, 1990, p. 205)

This argument by Rhoades follows naturally from the argument that I have been developing about the role of knowledge in shaping the organization of knowledge production in education. As a soft applied field, education is characterized by high "technological ambiguity" (a diversified intellectual focus) and high "resource dependency" on an "environment in flux" (that is, a need to respond to practical issues arising from school and society rather than from the theoretical logic of the research effort itself). This means that faculty members in colleges of education do not have natural intellectual communities to draw on for political strength, at least not in the way that psychologists or astronomers, for example, can draw on their national and international disciplinary communities for support. The intellectual labor of education school faculty is continually diffused demands from the environment rather than to their own colleagues within the field of educational research. The result is that they do not fall into intellectually distinctive social groupings within or across colleges (education schools do not have a standard departmental structure)."
and therefore they have few social resources for asserting faculty power or for countering the managerial authority of the dean.

Negative Consequences for Education Schools

This analysis of the nature and social organization of knowledge production in education schools has significant implications for the way in which these institutions function and the way in which they are seen. Consider first some of the negative consequences for education schools and then some of the positive consequences.

Low Status Within the University

There is no doubt that education schools are located at the bottom of the academic hierarchy within the American university. An important source of this low status is the nature of the knowledge produced by faculty members in education. One characteristic of educational knowledge that hurts it is the status race is relentlessly soft and applied character. The pinnacle of the academic status order is reserved for the hardest and purest of intellectual pursuits. It is not difficult to see

If Sisyphus were a scholar, his field would be education.

why this would be so. Hard knowledge disciplines are able to maintain general respect because their claims to validity are so difficult to refute, while the other disciplines suffer from having to qualify, categorize, and personalize their claims. Where-as the former seem to be standing on a firm empirical platform and speaking with a clear head voice, the latter wander around in a swamp of uncertainty and speak in a wisper. There is little doubt which of these will win greater attention and higher esteem. Likewise, pure knowledge fields, by addressing questions of broad theoretical scope, gain a decided status advantage over applied fields, whose scope of address is sharply restricted by time and place.

In addition, educational knowledge suffers from its low exchange value. After all, exchange value is the coin of the realm in the market-based environment of the American university. These universities are unique in their extreme sensitivity to market considerations in comparison to their counterparts elsewhere in the world (Trow, 1988). Depending heavily on tuition and forest to compete for customers in a buyer's market for higher education services, American universities have to give education consumers what they are looking for—credentials that can be exchanged for good jobs and attractive social positions (Brown, 1997). In this kind of environment, exchange value counts more than use value. And the rest of exchange value is the employers' and public's general perception of the reputation of an institution and of the programs within that institution. The leaves education holding, as usual, the short end of the stick. What education offers is soft use value—usable knowledge of marginal validity—which is not a commodity that can compete effectively with the credentials from the more prestigious realms of the university, which offer hard and pure exchange value.

Weak Authority Within Education and Educational Policymaking

It follows from the preceding analysis that the nature of the knowledge produced within education schools also makes it so that the authority of these institutions to speak in relation to them is relatively weak, even within their own world of schools and educational policy. As Cohen and Garret, in their discussion have pointed out, the impact of social science research on social policy is indirect at best (Cohen & Garret, 1975; Leidboim & Cohen, 1979) because of the difficulty it has in representing complex social policy consequences. The more widely researchers throw their net around a complex array of variables, the less valid and reliable their conclusions become, but the more narrowly and rigorously they constrain their studies methodologically, the more likely it is that they are leaving out important variables and the more uncomprehensible their findings are going to be to policymakers. Educational researchers suffer from this syndrome at least as much as other social scientists. These problems are particularly acute for the universities within the field who are seeking to create hard knowledge through educational research. The findings of educational studies that have the greatest claim to validity and reliability—are also likely to be the most trivial because real education takes places in extraordinarily complex settings where variables are intricately intertwined.

Educational researchers have an additional burden, however, that derives from their low academic status, their weak platforms, and their wispering voice. The knowledge base of educational researchers has a particular position of marginal credibility with the educators and educational policymakers for whom their research findings should be of the greatest utility. As low-status purveyor of educational knowledge that is soft, highly contingent, and largely ungeneralizable, they are not able to speak in tones that are likely to command respect and to shape educational policy. In short, they can easily be ignored. And with the credibility of the institutional experts on educational policy conflating questions like this, it leaves the field of educational reform and educational policy wide open to the influence of a wide range of others whose voices are granted at least equal standing.

Pressure to Transform Education Into a Hard Science

One natural consequence of all of this is that educational researchers would seek to transform the nature of their knowledge production from soft to hard and applied to pure. This has been the mission of the American Educational Research Association over the past 40 years. All one has to do is examine the burgeoning production of scientific research on education that has arisen from this organization, as evidenced by the explosion in papers presented at its annual meetings and by the compilations of scientific research about teaching and teacher education that have emerged from its membership. This movement to make educational research harder has never been at a standstill.
Group report in 1986, (Tomorrow's Teachers). In this report, the leaders of the leading research-oriented education schools in the U.S. proclaimed that the research efforts in their institutions over the preceding decades had produced a true science of teaching—with rock-solid validity and sweeping theoretical scope— that could now serve as the knowledge base for the professionalization of teaching. In a recent article in Educational Researcher, former ABDA president N. L. Gage restated this faith: 

In the last 20 years ... meta-analysis has yielded knowledge concerning the impressive magnitude, consistency, and reliability of the impact of teaching on student learning. As literature searches, findings, and methods justify...continuing the effort to build sciences of behavior. (Gage, 1996, p. 5)

There is a value in the effort to make educational knowledge more quantifiable and generalizable because it pushes researchers not to settle for the softest and most equivocal of findings. It is not very helpful if researchers answer every important question in the field by saying, "It all depends." Thus striving to establish and support harder claims is a valuable goal, but there is only so far that we can realistically move in that direction, and that is well short of the condition Gage calls a science of educational behavior. In order to create a solid ground for making hard claims about education, you can try to drain the swamp of human action and political purpose that makes this institution what it is, but the result is a science of something other than education as it is experienced by teachers and students. As I have argued elsewhere, such an effort may have a more positive impact on the status of researchers (for whom hard science is the holy grail) than the quality of learning in schools, and it may lead us to reshape education in the image of our own hyperinstitutionalized and disembodied creatures rather than our visions of the good school (Labaree, 1997b, chapter 6).

Another sign of the effort to move education into some of the硬化 sciences is the current generation of young, large federally funded centers for educational research. These centers mimic the urban and research-practice origins of educational psychology fields, which is particularly striking in a field as traditionally rural in research context as education has been. But these centers arise more from the government's desire to increase the efficiency of research funding and oversight (and the university's desire for large infusions of soft money) than from any discovery that educational knowledge has suddenly begun to accumulate into a rising epistemological structure. If anything, the centers are an effort to compensate for the lack of an accumulation of educational knowledge across studies—by organizing large loosely integrated research projects as a proxy for this kind of accumulation. The production coming out of a research center gives the impression of systematic construction, but as one close analyst, this structure quick-disaggregates into an eclectic array of disparate studies operating under the center's umbrella. In this way, an educational research center is no more urban than the shantytown on the outskirts of a third-world city. Each is a collection of villages rather than a true urban community.

Pressure to Transform Education Schools Into Pure Research Institutions

The distinctive nature of educational knowledge has produced another related form of negative impact on education schools by putting pressure on them to change their focus from research preparation to more prestigious status. Trying to mimic those disciplinary departments on the university campus with the highest academic standing, education schools—especially the elite universities—have frequently sought to change themselves into graduate schools of educational studies (Judge, 1982).

Geraldine Clift and James Guthrie (1988) tell the story of this quixotic quest in withering detail in their book, Ed School. The idea has been to back away from too close an identification with teaching and with the production of useful knowledge for schools and to focus instead on developing a body of research that is purer than the educa-

There is little that researchers can do to construct towers of knowledge on the foundations of the work of others.

A Sense That The Field Is Never Getting Anywhere

One last problem that the form of educational knowledge poses for those who seek to produce it is that it often leaves them feeling as though they are perpetually struggling to move ahead but getting nowhere. If Strype was a scholar, his field would be education. At the end of long and distinguished careers, senior educational researchers are likely to find that they are still working on the same questions that confronted them at the beginning. And the new generation of researchers they have trained will be taking up these questions as well, reconstructing the very foundations of the field over which their mentors labored during their entire careers.

This poses a problem not only for the researcher's sense of professional accomplishment and self-esteem. It also leaves the entire field open to ridicule and lording from those who stand outside. If these people can't get to first base in their own field of expertise, then they must not be very good. So maybe they ought to step aside and let a-t-
ent outsider stand in and swing for the fences. Could these outsiders do worse than the so-called professionals? Because educational researchers are unable to be definitive and to demonstrate that they are making progress, they leave the field wide open to amateur educationists who feel little reason to be reticent about making their own contributions to educational thought.

Positive Consequences for Education Schools Have led to a variety of negative consequences for education schools that arise from the peculiar characteristics of educational knowledge, I now turn to some of the positive outcomes that arise from the same source.

Producing Useful Knowledge Is Not a Bad Thing
The close identification of education with raw value and its alienation from exchange value has the potential to work to its long-term advantage socially and politically. After all, the university’s practice of selling credentials that are based on appearance and reputation more than substance and real learning is one that is quite vulnerable to public challenge. This practice has all of the characteristics of a confidence game because it rests on an interlocking set of beliefs that are quite shaky. The chain goes something like this: It makes sense for consumers to invest in the credentials of a respected university because the prestigious research carried out there produces capable graduates who then deserve preferential access to jobs. Yet each part of this chain reasoning depends more on faith than fact, and the whole system can collapse if challenged to prove itself. After all, the value of the credentials has more to do with the prestige of the institution than with the knowledge that students acquire there. In addition, the existing fiscal pressures at all levels of American government put higher education increasing in the position of justifying the enormous public investment in terms of verifiable outcomes rather than tradition or belief. This problem is exacerbated by a related issue: the gross social inefficiency of providing a public subsidy for an education system that is grounded more in individual mobility (helping me get the job I want) than in substantial public benefit (providing us with the capacities we need) (Labaree, 1997b).

In this setting, the strong connection between education and usable knowledge can be a valuable asset. For the most part, educational research arises in response to clear current problems within a predominantly important institutional arena. This timeliness, responsiveness, and potential usefulness makes it much easier to justify—in the emerging era of outcomes measurement and cost-effective public investment—than much of the university’s more prestigious but less relevant research efforts. Of course, there are several limitations to this pursuit of applied knowledge. One, discussed earlier, is that the findings of educational research are so soft that this applied knowledge is of limited usefulness. Unlike fields that are comfortably burdened by high exchange value, educational research is eager to help improve the practice of education, but its best-kit does not contain the kind of powerful cures that can be found in the medical doctor’s black bag. Another is the relentlessly— even proudly—artificial quality of much of this research. Theoretical significance (like empirical validation) is something that educational research should aspire to in spite of the enormous difficulties that this work poses for such efforts. In the absence of theoretical aspiration, educational research often seems rather patched and pedantic. But this failing arises more from intellectual laziness than from the characteristics of educational knowledge. The kind of practical knowledge that educational researchers produce can be theoretically provocative even if it is somewhat restricted in theoretical scope, and in this context, its potential social usefulness can be both politically advantageous and vocationally gratifying for the producers in ways that are not available to researchers in less applied fields.

Freedom From Consumer Pressures
A related benefit for education that derives from the kind of knowledge it produces is that it is relatively free from the disciplinary pressures that have shaped the rest of the university. In general, the American university has been compelled to resist the demands from consumers for programs and credentials that will serve individual ambition in the pursuit of social position. But the close identification of education schools with the vocational preparation of teachers and with the production of research to meet practical educational needs means that these schools are constructed around the accomplishment of social rather than individual ends. Their primary concern is social efficiency rather than individual mobility. This naturally puts constraints on both research and programs because both must be responsive to the most urgent and current societal concerns. As a result, educational researchers do not enjoy the luxury of pursuing pure inquiry in whatever direction theory might lead them—or pursuing idiosyncratic inquiry in whatever direction personal preference might propel them. But at the same time, they are liberated from involvement in a market-dominated instructional process that requires them to provide fickle educational consumers with whatever courses and programs the latter demand. And they have the satisfaction of knowing that they are working on issues that matter, both for the individual actors within education (like teachers and students) and for the larger society.

Another advantage that accrues to educational researchers from the nature of the knowledge they produce is that they are free to deal with educational questions from whatever disciplinary perspective or methodological approach they find appropriate. This, as in the previous example, involves several trade-offs. One is that they give up freedom of institutional focus—because educational researchers are compelled to focus on education—in return for considerable freedom in the way in which they choose to explore this subject. Researchers in the disciplines are often subject to a test of disciplinary correctness that can be quite confining. “Is this really political science?” they are asked (or history or philosophy or biology). If not, it doesn’t count in the internal status order as measured by merit pay, promotion in rank, and professional recognition. But educational researchers are free to be as eclectic as they wish in this way: they choose to intermingle disciplinary perspectives or methodological orthodoxies. There is an attractive pragmatism within educational research, which prefers to reward approaches that work rather than those that are canonical within a particular theoretical subculture. The downside here is that, at the same time that educational researchers...
cut loose from unnecessary disciplinary constraints, they also frequently lose some of the methodological rigor that comes from working within a clearly defined disciplinary tradition. The result is a tolerance for poor research design and sloppy thinking. However, there is nothing in the nature of educational knowledge to prevent researchers in this field from creating their own standards of rigor and from policing their own ranks in light of these standards.

**Freedom From Hierarchical Constraints**

The thoroughly rural and divergent character of educational research makes for a social organization of research effort that is relatively egalitarian. Senior researchers are not in a strong position to control the research process because their authority rests on shaky foundations. The noncumulation of data is an essential element in the field. It means that newcomers are not automatically made obsolete by the flow of new work. The lively interchange of ideas in the field is a distinguishing feature of the field. The easy flow of ideas means that there is a smaller pool of ideas. This makes it possible for individuals to think independently and to develop their own views.

**Producing Soft Knowledge Is Now the 'In Thing'**

In the past decade or so, there has been a strong and highly effective series of attacks on positivism and on the validity of quantitative research. This process has been played out in a wide range of fields, beginning with the philosophy of science and continuing into education. All of this is thoroughly familiar to the members of the American Educational Research Association, who have seen the argument played out at great length in the pages of Educational Researcher over the past 15 years. As a result of this epistemological battle, the consensus has shifted toward a position that asserts the essential softness of hard knowledge and the essential uncertainty at the core of the validity claims made by the hard sciences. This means that soft knowledge fields such as education now serve as a source of relief for those who are tired of the rigors of traditional research and not as an affliction only affecting educational researchers.

Unfortunately, the newly relaxed philosophical position toward the softness of educational knowledge—combined with its freedom from disciplinary constraints and its openness to newcomers—has led to the freezing out of educational researchers into a field characterized by methodological rigor in their work. As a consequence, all one has to do is read a cross section of dissertations in the field or of papers presented at educational conferences. For many educational researchers, apparently, the successful attack on the validity of the hard sciences in recent years has led to the position that softness is a problem to be dealt with but a virtue to be celebrated. Frequently, the result is that qualitative methods are treated less as a cluster of alternative methodologies than as a license to say what one wants without regard to rules of evidence or forms of validation.

But to see this point about the dangers of soft knowledge (paradigms earlier point about the dangers of applied knowledge and of nondiscipline-based research) as a caution to educational researchers against embracing too warmly the necessity imposed on them by the kind of knowledge they produce. For in looking for the silver lining in the cloud of problems surrounding the production of educational knowledge, we should not ignore the significant changes in the field itself. The characteristics of educational knowledge—present researchers with both advantages and disadvantages. These elements do not cancel each other out, but instead, in combination, they define a universe of working possibilities and enduring dilemmas within which educational researchers have to forge their way.

**An Ability to Speak to a General Audience**

From the perspective of someone in the larger and more public disciplines, educational researchers speak, with a voice that is laugubly amateurish. Their lack of professionalism is apparent in a discourse that does not have the exacting language and verbal shorthand of a truly advanced field of study. A paper that is truly interesting in a field such as math or biochemistry—that is, at the leading edge of theoretical development—is one that should be completely incomprehensible to an apprentice in the field, much less to a layperson. By comparison, the discourse within education is transparent in language and widely accessible in meaning. All the complaints about "educatetees" only serve to prove the point because they lend to come from those completely outside the educational research community who are looking at its literature. They are not saying they cannot understand what the researchers are saying, only that they themselves could say it better. But none of these critics would think of trying to read the cutting-edge research in math or biochemistry or to complain about math- or biochemists speaking because these fields are supposed to be esoteric and beyond the reach of the layperson. Education, however, is largely accessible to outsiders and therefore vulnerable to discourse critique from nonexperts.

This situation puts educational researchers in a position to become public intellectuals in a way that is not possible for scholars in fields whose knowledge development makes them incomprehensible to the ordinary citizen. It is easy for outsiders to look into education—to contribute, critique, and edit. But at the same time, this makes it easy for educational insiders to reach out directly to members of the public and to make a case to them about the problems facing education and the ways in which we can deal with these problems. In this sense, educational researchers may not have the kind of authority that comes with hard core science, but they have a ready rhetorical access to the public that is lacking in more authoritative fields. As a result, the issue of the knowledge produced by educational researchers may in fact offer them a political and social opportunity that is largely closed to the more prestigious realms of the university.
Notes

An early version of this article was presented at the annual PACT (Professional Actions and Cultures of Teaching) conference (May, 1995, Oslo, Norway) and also at the 6th International Conference in Educational Research (May, 1997, Oslo, Norway). I am grateful to the following for comments on an earlier draft of this manuscript: Andrew Gillett, Jay Goodnow, Andy Hartup, Robert Kienzle, Nohsan Siew, Gerald Steinman, and Heidi Trivett. I am also grateful to the three anonymous reviewers and to Robert Dornoomay, whose comments on an earlier draft proved very helpful.


For more on the impact of this distinction between exchange value and use value, see Collins (1976a) and Bocq (1977). There also developed an argument at greater length in Latour (1997b, 1998a).


Without acknowledging this, the Holmog Group began to seek away from its early understanding of the natural science model for educational reform in its second report (Holmog Group, 1995) and dropped the explicitly triad based report (Holmes Group, 1996). See Latour (1998b) for a discussion of the sharp changes in argument and rhetoric that characterizes these three reports.

For example, see Howe (1985).

References


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Accepted February 6, 1998