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RESEARCH AND PRACTICE

A TRIBUTE TO NELSON HAGGERSON

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As a teenager, needing to feel unique, I rebelled against my family and society by declaring that I was an atheist. I held that position because I could not see the beneficial effects for Jews of the Judaic god with which I had been raised. Of course, the Holocaust and World War II were a part of my youth, and these events were uniquely suited to test the faith of any person. But I could not see any more positive effects on people’s lives as a result of worshiping the Christian version of that same god.

During this youthful period of my life I was also aware of the continuing prejudice against African Americans, in particular, but prejudice directed against Asians and Puerto Ricans as well. What I observed, as an uninvolved but reflective teenager, was that many of the purveyors of prejudice included those who worshiped the same god as the groups they treated unfairly. My reasoning about this was simple: a god who loved Jews, or Blacks, or Hispanics, while simultaneously allowing them to be physically exterminated, or to live in poverty and be held in disrespect by those in power, was nonexistent or cruel.

In the face of the political, economic, and social conditions of the real world, it was not possible for me to retain any religious faith. Later in my life I realized that I was searching for some kind of warranted belief, which is, of course, exactly the opposite of faith. Eventually I also discovered that the atheism I espoused was no more supportable through strong warrant than was the faith I was expected to hold. I could not find the warrant I sought for intelligent disbelief or belief in religious life. What I discovered about myself was that I was agnostic to the core, and the reason for that was that I believed deeply in warrant.
Searching for Evidence

I have no idea of their origins, but somewhere in my life I developed evidentiary standards. And with my emergent standards for evidence I could not abide either the true believers or those that scoffed. Somehow, as I was opened up by the course work and the freedom to think in college, I learned that mystery was not, automatically, miracle. We do not have to posit gods or supernatural forces when we have no explanation for, say, the origins of life or thunder. The origin of life is still a mystery, while the source of thunder is now known. So the thunder god has died. What is unknowable, now, should be thought of merely as that—unknown. Neither supernatural forces nor unsubstantiated theories have to be offered as explanations for what we do not or cannot know.

The Relationship between Warrant and Method

While I am persistent in demanding warrant, a sense that a claim is justified, I worry a good deal less about method. I am open to a rational, logical case from philosophers and laypeople alike, for warrant is not an attribute of scientists or the well educated alone. Farmers, crafts-persons, and teachers often develop some wisdom of practice, and it is not to be scoffed at because it does not meet formal, scientific standards. On the other hand, what passes for wisdom need not be accepted uncritically either. Science can help sort out the folk beliefs that are worth taking seriously from those that are not.

I also gratefully accept data collected in adherence to accepted standards of practice, along with the intelligent interpretations that must accompany such data, from qualitative scholars of all persuasions—phenomenologists, symbolic interactionists, feminists, queer theorists, and hermeneticists. The key caveats here are that the data collected must meet the standards for data collection in some discipline or field of study, and it must be interpreted sensibly. Of course I am the one to decide whether those criteria have been met. I have, however, managed to convince myself that I use the "reasonable person" test for judging studies and their data, and thus I believe that my criteria are adequate for the job of evaluating warrant.

I find that I am predisposed to be most tolerant of well-designed quantitative studies and estimates of effect sizes from those studies, but I readily accept and occasionally applaud insights garnered from investigative reporters using the highest standards of journalism. While others may not think me consistent, I have no trouble with my catholic tastes. I consistently seek warranted belief about the things that interest me, but the warrant can be derived from quite different sources.

Evidence

I am well aware that there are many ways to define evidence, so that one person's absolutely convincing data are another person's continuing source of skepticism. Jury trials make this obvious every day. Disagreements about the strength of a warrant are to be expected, and assessment of a warrant's strength might well change over time. We see that clearly in the history of the public's belief about the relationship between smoking cigarettes and disease, or about the relationship between greenhouse gas emissions and global warming. The strength of the warrant has changed over time and more and more people have come to accept these relationships as "proven." This same point can also be illustrated in education by looking at the research on school funding and on class size. For decades the warrant behind policies for increasing funding for some schools, or for reducing class size in some grades, was not strong enough for people in authority to make the expensive decisions that such evidence dictates. Until recently, the extant research available to support the policy was unconvincing to many. But that has changed in recent years, and now the reason for not spending enough money to provide quality education is simple meanspiritedness. It is no longer a lack of scientific warrant.

Evidentiary issues become complex as they relate to educational policy, because policy is always about the enactment of values. So judgments about the strength of warrant can easily become entangled with strong values. For example, we need low taxes to foster economic growth, and we need lower class sizes to increase student achievement in order to promote economic growth. But these two values are in opposition, since reductions in class size require greatly increased expenditures of public moneys raised through taxes. What is a legislator to do? In fact, the mingling of evidence and values is inherent in all educational research, and not to recognize that is to misunderstand both education and
the social sciences. That is a lesson that took me a long time to learn in my apprenticeship as a researcher.

A Research Apprenticeship

I began my college career in 1955 as a business major, opened a business while a freshman in college, and learned that making money was neither difficult to do, nor particularly interesting. The business I had opened, with another eighteen year old, was a bar and grill. There I met many interesting and strange people. So I took a special interest in my first psychology courses, choosing to major in clinical psychology instead of business. At twenty-one, with a wife and young child, I left the City College of New York and moved to Los Angeles. Working nights as a printer, I finished my undergraduate degree in 1960 at UCLA, still in psychology, but with enough courses to have almost full majors in both anthropology and sociology. My interests were in the entire domain of the social sciences.

Because UCLA was so experimentally oriented, I decided to seek a master’s degree at California State University at Los Angeles, with an emphasis in clinical psychology. But UCLA’s influence, along with my own nature, made that a painful experience. I found clinical psychological theory and practice to be based on many unwarranted claims. In fact, I became quite argumentative in some classes because I thought that some of what I was taught was nonsense. At times I had trouble telling the loonies from their therapists! I simply demanded better evidence as a guide to clinical practice. I wanted to rely on scientific methods for my social science work. I sought warrant for my practice. So I switched to experimental psychology and began to value my own nature by allowing for the cultivation of my natural skepticism, which is the perfect aptitude for scientific work.

A series of jobs as a novice researcher in human factors psychology and training psychology allowed me to support my growing family and learn more about social science methods. Then, after deciding to pursue my doctorate and applying to Stanford’s psychology department, I received an odd letter. The psychology department had turned me down, but they had sent my application to the school of education, as a courtesy. Psychology noticed that I had published some research that appeared relevant to education, albeit as a very junior author. And education accepted me, though I had never applied.

I entered Stanford’s School of Education without knowing anything about education. But there my skills and sensibilities as a researcher were honed. Between Stanford and UCLA I studied under five presidents of the American Psychological Association, Albert Bandura, Donald Campbell, Lee J. Cronbach, Ernest Hilgard, and Quinn McNemar. I studied under or interacted with presidents of the American Educational Research Association such as Elliot Eisner, Nathaniel Gage, and Patrick Suppes, and had courses or discourse with other remarkable scholars in psychology and education—Richard Atkinson, William Estes, and Richard Snow, to name just a few. Teachers of this quality have enormous effects on their students, and they gather about them students who have enormous effects on each other. My views of scholarship were shaped by both my teachers and my peers, and I thank them for that. My tentative search for warrant became grounded in philosophy and psychology, and I applied my deep feelings about evidence and the nature of warrant to educational research, focusing on the study of teaching, and moving eventually to educational policy.

Reflection on My Development as a Scholar

Many years after I began my career I learned that the eminent physicist Richard Feynman (1999) had eloquently expressed thoughts that were relevant to my nature and my affinity for social scientific work. Feynman (1999, 186) distinguished science “from the forms or procedures that are sometimes used in developing science.” That is, Feynman said, the various methods of science—the true experiment, statistical inference, reliability and validity of measures, and so forth—are not themselves science, but merely the tools of science. Somehow, despite exposure to some bad teaching that confused these two concepts, I also came to recognize this, and that is why I am so catholic in my views on method.

After distinguishing science from its methods or tools, Feynman (1999, 187) went on to define what science really was. His odd definition is one that resonates with me: “Science is the belief in the ignorance of experts.” That definition captures precisely what I love about being a scientist in the social domain. A practicing social scientist should be
skeptical of everyone, particularly those in authority: the politicians, chief state school officers, business leaders, all the various "experts" who so often confuse values and politics with evidence. Your job as a scientist, says Feynman, is to doubt everything you hear, to examine the warrant for every claim made, perhaps especially the claims made by those in authority. I love science because it gives me the right to challenge the claims. In fact, one way of looking at it is that science demands that you challenge existing claims and authority.

Looked at in this way science is the single most powerful ally of democracy. That is why Dewey recommended that science be a central part of the school curriculum. In Democracy and Education (1916) Dewey said that without initiation into the scientific spirit one is not in possession of the best tools which humanity has so far devised for effectively directed reflection. Dewey also noted that science's norms were precisely democracy's norms: tolerance for free inquiry, tolerance of diverse opinions, and the demand for free communication. Dewey and Feynman shared a belief that said doubt is the fundamental characteristic of the scientist, and that teachers who teach science as if they are teaching some kind of truth are teaching beliefs antithetical to genuine science. On that same theme Dewey proclaimed that democracy required uncertainty—for uncertainty is precisely the opportunity within which people can exercise judgment. The quest for certainty, said Dewey, is hostile to the building of democracy and to freedom. Thus these two great thinkers, Dewey and Feynman, see that the mainsprings of both our democracy and our scientific achievements are in disquieting situations. Politicians, as well as many educators, do not always think about that as they push methods that lead children to give "the one right answer" in whatever subject area is being learned. We actually would be far better off getting good questions from our students rather than getting good answers from them!

That science is under attack today from the academic left strikes me as strange, particularly since those same critical theorists, with their postmodern sensibilities, would claim to be strong supporters of democracy. As Dewey and Feynman note, science is actually inextricably bound up with democratic life. If the information from scientific inquiry is used poorly, or if the information has been corrupted (as in the case of some of the science associated with cigarette smoking, some drug tests, the research on bilingual education, and the data sets from intelligence testing), this is the fault of morally impoverished capitalism, or the domination of ideology over data. The corruption of science and its bad use are associated with social, economic, and political issues, and are not the fault of science as a way of knowing.

Thus, by choosing to be a social scientist I choose also to be a strong advocate for the rights promised by democracy to all our citizens. These are the beliefs I grew into, though it certainly took me many years of unreflective thought to slowly understand what I believed and to decide where I wanted to go as a scholar.

Changing Directions

After a traditional and successful career as an educational psychologist studying teachers and teaching, using both quantitative and qualitative methods, I entered a more public arena. My work on the study of teachers and schooling led me to question authority, as a scientist should. My hundreds of hours in classrooms made me think that the criticisms of our schools by then-President Reagan and Secretary of Education William Bennett were disingenuous. I found that members of the first Bush administration were simply lying about our schools. I had reason to think that federal and state officials, together with business leaders, were talking nonsense about what went on in our schools and how our schools were doing. On the basis of data—sound scientific data—I chose to challenge the widely accepted belief that the schools were doing poorly.

I was able to demonstrate in dozens of op-ed pieces, journal articles, chapters, and a book (Berliner and Biddle 1995) that our public schools were doing better than they ever had before in terms of the numbers who graduate from high school, the rigor of the courses they take, and the achievements of students. I was able to show that our nation's performance on international tests of literacy, science, and mathematics is not as serious a problem as the critics of our schools believe. I have been able to demonstrate that poverty, particularly urban poverty, is the most accurate explanation for the poor academic performance of many American youth. All the contemporary passions about putting into place or removing a constructivist curriculum, all the efforts to institutionalize different kinds of school reform plans, all the debates about the role of testing in
improving school performance, all the concerns about the improvement of professional development for teachers, I believe to be partly wasted effort. I say that because in this country wealthy suburban districts have children that are achieving quite well, though there is still great room for improvement. But in this country there are also school districts that operate managerially like the schools of a third world nation. And the student performance in those schools is generally quite low. Those school districts are usually urban, deal predominantly with the poor, and deal usually with children of color.

American public schools on average are not exceptional. But I have shown that the average scores in a country as diverse as ours mask pockets of excellence. We have districts and schools that are world class, competitive with any nation in the world. I have also shown that the average scores mask, as well, the pockets of shame we have. We have districts and schools that should be an embarrassment for a country as wealthy as ours.

My credentials as a scientific scholar, and the quality of the database I used, provided me a special chance to refute those who would abandon the public schools. I have been able to moderate slightly the effects of these people on public opinion. In general, I use my scholarship now to challenge those in authority, those that would privatize our public schools. I have been able to moderate slightly the effects of these people on public opinion. In general, I use my scholarship now to challenge those in authority, those that would privatize our public schools. I have been able to moderate slightly the effects of these people on public opinion.

The Scholarship I Favor

A series of accidents brought my research skills to the study of teaching, a field I could never accept as simply an art. I know that teachers cannot strictly follow formulas, rules, or algorithms. I know that teaching regularly calls for individualization, improvisation, creativity, and emotional sensitivity. I know that teaching requires artistry, and to complicate the picture, that artistry must be displayed in real-time and in public settings. For many scholars, these are conditions of employment that preclude assistance from science. But I have a preference for scientific knowledge about teaching, learning, and the processes of schooling. My colleague and friend of many years, N. L. Gage (1994, 565), has expressed my reasons for this better than me:

It matters greatly whether a mode of inquiry and a body of knowledge have scientific standing. Scientific method is recognized as the major avenue into valid knowledge about certain important aspects of the world. The victories of the natural sciences have led us to seek similar achievements in the world of human affairs by using the same general methods.

As Gage (1992, 9) further noted,

But what do we mean by scientific knowledge? It is] first, knowledge obtained empirically, through observation and experience, in ways that are public, that is communicable and, in principle, available to other persons with the necessary training and facilities. Second, scientific knowledge is relatively precise, clearly defined, obtained with reliable instruments or procedures. Third, scientific knowledge is relatively objective in that it is determined by the data more than by the investigator's preferences, hopes, biases, or personal advantage. Fourth, scientific knowledge is replicable in that one investigator's findings can be obtained by other investigators who have the requisite competencies. Fifth, scientific knowledge becomes relatively systematic and cumulative in that it develops into an organized system of nonfalsified propositions, or a theoretical framework. Sixth, scientific knowledge makes possible the understanding or explanation of relationships between variables, the prediction with better-than-chance accuracy of the value of one variable on the basis of earlier knowledge of another variable, and control or improvement of one variable as a result of the deliberate change in another variable. Finally, scientific knowledge has survived attempts to falsify it.

So, like Gage, I privilege science as a means of providing reliable knowledge, though I have no arguments with those who espouse other ways of knowing, including the mytho-poetic approach described by my colleague Nelson Haggerson, whom we honor with this volume. Professor Haggerson recognizes more clearly than most teachers and scholars the importance of the personal, spiritual, and moral in thinking about educational and life issues. Our difference is that he chooses to make stronger claims about the trustworthiness and usefulness of knowledge derived from such approaches than I do. I am, by choice and nature, a functionalist psychologist (Berliner 1990), and always feel the need to assess Haggerson's (or any other scholar's) claims by means or methods that scholars will often reject.

Whenever possible, my desire is to test by some acceptable method of science the claims of those educational scholars who use other frameworks for developing knowledge. I remain properly skeptical of their
work unless I can do so. But skepticism is totally different from rejection. Science is about skepticism, not about rejection. There are other ways of knowing than science, as is made clear by every religious scientist that has ever lived! But social science methodologies, broadly conceived, yield the ways of knowing that I most favor. Quality research from these kinds of endeavors is capable of providing me with the strongest warrant for thinking about both policy and practice.

Certainly, strongly warranted scientific claims do not always influence educational policy and practice. If they did, we'd have universal preschools of high quality, more professional development of teachers, mentoring programs for the first two years of induction, late-exit bilingual programs, more hands-on science and mathematics, more use of the project method with students, more balance between “whole-language” and phonics approaches to reading, better pay for teachers, less tracking, more cooperative learning, less high-stakes testing, fewer non-certified teachers, fewer teachers teaching out-of-field, fewer children retained in grade, and so forth. These are all areas where I believe strong scientific warrants exist. Action can be taken with some surety that the resultant state of affairs will resemble that found in the research reported.

Clearly, however, science is only one of the ways that influence what people choose to do. Politics and ideology and a neighbor’s experience often have greater influence over the decision-making processes affecting education. Nevertheless, despite its poor track record for influencing policy and practice, and despite the fact that not all of education’s problems are amenable to study by science, when it can be developed, a strong scientific warrant is something to respect. That is why there will always be a role for the social sciences in education, and why other ways of knowing have their place as well.

Education will always be contested ground—methodologically as well as politically. Instead of bemoaning that fate, we should rejoice that the complexity of the educational system means that all who are concerned with it will have a chance to influence it. That is appropriate for a democracy. I am proud to represent the social science community in the continuing discourse about education. And I am proud, as well, to count among my friends Professor Nelson Haggerson, who has influenced that discourse for decades. We are all better off for his participation in this, the most important continuing conversation occurring in our democracy.

References


