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On the Role of Scholarship in a World of Research

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> A Man infallibly knows, as soon as ever he has them in his Mind that the *Ideas* he calls *White* and *Round*, are the very *Ideas* they are, and that they are not other *Ideas* which he calls *Red* or *Square*. Nor can any Maxim or Proposition in the World make him know it clearer or surer than he did before, and without any such general Rule. This then is the first agreement, or disagreement, which the Mind perceives in its *Ideas*; which it always perceives at first sight; And if there ever happen any doubt about it, 'twill always be found to be about the Names, and not the *Ideas* themselves, whose Identity and Diversity will always be perceived, as soon and as clearly as the *Ideas* themselves are, nor can it possibly be otherwise.
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> John Locke, *An Essay concerning Human Understanding*. Peter H. Nidditch, ed., Book. IV, Chap. I, ¶4:14-25 (p. 526).

¶1 On October 10, 2003, at about 3:00 p.m., Eastern Time, a Google web search for "research" returned approximately 128,000,000 hits. Immediately following, a web search for "scholarship," returned 17,100,000. Judging from the top 10 hits in the latter, all of which concerned scholarships in the sense of student support, not scholarship in the sense of high intellectual attainments, it is fair to say that the attention on the Web to research is much higher than it is to scholarship. Here the Web quite probably reflects the conventional valuations of both academe in general and the field of education in particular. A search of the 100 volumes in the *Oxford Reference Online* returns 191 hits for "research," spread across 20 different subject areas, compared to 16 for "scholarship," in four subject areas. A full-text search in JSTOR shows significantly more attention to "research," compared to "scholarship," in the *History of Education Quarterly* and the *Journal of Educational Sociology*. Needless to say, a Google search of the AERA site shows a heavy favoring of research over scholarship.

¶2 In any field, the concerns of research and scholarship overlap, but there are significant differences. Whereas research starts with well-defined questions, to which the researcher seeks a clear and definite answer, scholarship begins with the cumulative state of a field, the broader the better, and seeks to integrate findings, new and old, into a coherent understanding of the whole. If rigor and technique are key virtues for the researcher, erudition and insight are those for the scholar. The good researcher needs much knowledge, which he uses to pose particular questions and to answer them beyond dispute. The good scholar also needs much knowledge, which

she uses weave a web of particulars into a coherent whole. In these senses, scholarship and research are complementary. There are signs, however, that in practice, at least in the field of education, too little attention to scholarship, too much to research, may render important efforts less potent than they deserve to be.

¶3 Consider, for instance, *How People Learn: Brain, Mind, Experience, and School* by the Committee on Developments in the Science of Learning, a widely read report sponsored by the National Research Council and supported by funding from the National Academy of Sciences and the U. S. Department of Education. *How People Learn* explains the implications of recent research by cognitive scientists for education. From the outset, it raises upbeat expectations: over the past three or four decades, a "revolution in the study of the mind" occurred. The Committee holds the consequences for the design of curriculum, for teaching, and for assessment to be substantial. As cognitive researchers work with teachers in real classrooms to bring these consequences about, the chances grow for the substantial improvement of practice. "These developments in the study of learning have led to an era of new relevance of science to practice." *How People Learn* aims to explain the science and its relevance to educational practice.

¶4 From the point of view of educational scholarship, *How People Learn* propounds a misleading then-now comparison. Early on, the Committee asserts that circa 1900 the goals of education were restricted. "It was not the general rule for educational systems to train people to think and read critically, to express themselves clearly and persuasively, to solve complex problems in science and mathematics." Now, a hundred years later, these attainments "are required of almost everyone in order to successfully negotiate the complexities of contemporary life." Let us, for the sake of analysis, grant the plausibility of both statements; the problem is that they are not comparable. What educational systems do as a general rule is not the same as what leaders and reformers believe life requires almost everyone should attain. A scholarly sound then-now comparison would need to compare the general rule then to the general rule now, or the aspirations then set our by educational leaders and reformers to those now set out by the same such groups. Neither comparison suggests the great leap forward proclaimed in *How People Learn.*

¶5 At the start of the 21st century, high literacy, as the Committee understands it, has not become the general rule for educational systems. Compare the general rule a hundred years ago to the general rule today: the advance is not great. As recently as June 26, 2003, the New York State Court of Appeals upheld a lower court judgment that New York State is failing to provide the children of New York City with schooling that fulfills the Education Article of the State Constitution. The State enacted this article in 1894. In the judgment of the courts, it requires provision of a "sound basic education," essentially what *How People Learn* describes as the general rule of 1900 – imparting "the basic literacy, calculating, and verbal skills necessary to enable children to eventually function productively as civic participants capable of voting and serving on a jury." It is not only in New York that state courts are finding the educational system to be failing to meet the public educational commitments set forth constitutional declarations circa 1900. What was adopted then as the general norm, is still not yet the general rule.

¶6 In addition, the pedagogical visions, which members of the Committee on Developments in the Science of Learning are advancing, differ little from the pedagogical visions advanced by leading educators circa 1900. Both the pedagogical predicament and proclaimed pedagogical possibilities have been much more constant over than past hundred years and more than the Committee suggests. Throughout *How People Learn*, the Committee does not come to terms with the aims and ideas of their predecessors. The strength of *How People Learn* is in its coverage of the current research in cognitive science relevant to the practice of education. The weakness of its scholarship lies in the distorted picture it gives of the long-term relation between research and practice in the field of education. As a result, the Committee undercuts its very worthy aim – to help "all individuals achieve their fullest potential."

- By not showing the continuity between its views and previous systems of pedagogical knowledge, the Committee weakens the intellectual case for a science of learning by foregoing opportunities to demonstrate the repeatability of findings and the triangulation of results.
- By ignoring complementary views, which perhaps were not as well-grounded in some specific areas, but were more rounded and complete, the Committee promulgates a new science of learning that addresses a few particulars in depth, while leaving significant gaps, seemingly addressable only in some indefinite future.
- By not stressing the continuity of well-informed views over the past hundred and fifty years, the Committee makes the task at hand seem deceptively simple, inviting over-confidence on the part of both leaders and followers, which can all-too-easily result in a collapse of expectations. The sciences of learning have long propounded a stable agenda and must gird anew for a protracted effort.
- By not dealing substantively with predecessors, the Committee misses an opportunity to pin down with precision precisely what is new and what is perennial in the range of its work. Without such discrimination, the allocation of scarce resources for research and development will be neither optimally efficient nor fully effective.

¶7 *How People Learn* avoids scholarly complexities. A case in point is the way the Committee finesses William James, even though James' *Talks to Teachers on Psychology* is undoubtedly the committee's most worthy prececessor. For the Committee, James is part of the then in their then-now comparison so supportive of the now. The Committee suggests that the new science of learning shows the importance of pre-existing knowledge in human abilities "to remember, reason, solve problems, and acquire new knowledge." The Committee observes that even young infants actively shape their learning, attending to some forms of information more aptly than other ones. "The world they enter is not a 'booming, buzzing confusion' (James, 1890), where every stimulus is equally salient." So much for James! He is obviously and thoroughly irrelevant, propounding something so antithetical to a fundamental finding of the new science of learning.

¶8 But the scholar will here feel a certain unease provoked by the Committee's dismissive rhetoric. It prompts an urge to check the citation, an activity which

eventually leads the scholar to want to get in a dig or two. Going to the 63 pages of References at the back of *How People Learn*, "(James, 1890)" unpacks to

> James, W.
> 1890 *Principles of Psychology*. New York: Holt.

Ah, let us all praise the APA for bringing simplicity to our work – who needs page references when all matter worthy of citation consists of research reports 3 pages, plus or minus, in length. The scholar knows that (James, 1890), a.k.a. "James, W. 1890 *Principles of Psychology*. New York: Holt," so innocuous in appearance, actually consists of two volumes, each a bit under 700 pages in length, not counting the Index in volume 2. Said index yields no references to infants, and only one to confusion, which takes one deep into a chapter on reasoning and concerns – I kid you not – the confusion experienced by a lumberjack's dog, on being told to fetch a wedge and finding only an axe, irremovably embedded in a stump. (James, 1890, II, 352) Undeterred, the scholar finds other, more promising entries, particularly "baby's first perception" and "his early instinctive movements." Although these passages prove interesting, they lead not to the "booming, buzzing confusion."

¶9 Rather than read through some 1390 pages, the scholar takes to the web, believing it probable that so famed a work, securely in the public domain, will be there is a full-text edition, which she then could search electronically for the quotation. Had the Committee tried this expedient, its members would have joined the lumberjack's dog, plunged into confusion, for full-text searching would not lead them to their quotation. Fortunately, by this time, the scholar, habituated to an appreciation of correct quotation, has ripened her unease into a realization that James wrote, not of a "booming, buzzing confusion," but of a "blooming" one, the difference being subtle in thought, but crucial in a full-text search. That search finally converts (James 1890) to (James 1890, I, 488).[1] With the quotation located, scholarship can begin to work towards a more satisfactory interpretation of the relation between the Committee's new science of learning and the psychology of the late 19th century, especially as elaborated in the work of James.

¶10 What the Committee imputes to James, is not what James suggested. His remark – it is an aside – occurred in a chapter, on "Discrimination and Comparison." On entering the world, the infant does not experience a multitude of stimuli, each equally salient. Consciousness, for James, is a very active agent. Whether infantile or mature, it always experiences multiple sensations, its sensations, not external stimuli, fused into a unity. From the beginning, the baby, like the child or the adult, feels its impressions, through its many different senses, coalesced together in the stream of consciousness. The human must build the capacity to discriminate significant aspects of these, comparing meaningful particulars one with another, constructing a world of consequential recognitions by mobilizing a rich store of instincts and with those separating out interesting specifics from the primordial unity. "The baby, assailed by eyes, ears, nose, skin, and entrails at once, feels it all as one great blooming, buzzing confusion; and to the very end of life, our location of all things in one space is due to

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[1] At http://psychclassics.yorku.ca/James/Principles/prin13.htm (October 3, 2003).

the fact that the original extents or bignesses of all the sensations which came to our notice at once, coalesced together into one and the same space." The infant is not recoiling in fear from a booming, buzzing confusion of stimuli. The infant feels a sparkling wonder at the blooming, buzzing confusion within the unitary immediacy of it own sensations and turns its instinctual drives to disclosing the meaning and power of everything that blooms and buzzes within it. It is hard to imagine a more eloquent vision of what the Committee wishes to propound.

¶11 As the Committee finessed any serious connection with the work of William James, so it does for virtually all pedagogical knowledge advanced prior to the advent of cognitive science research. It is not that the Committee's science of learning is wrong-headed. The implications of it for practice that they draw out seem eminently sound. But by talking as if their science of learning and its implications are something new and unprecedented, they weaken their scientific claims; they narrow the scope of application unnecessarily; they underestimate the difficulty of implementing their ideas throughout the educational system; and they risk spreading scarce resources too thin to maintain inquiry and innovation into those areas that are genuinely new.

¶12 In *How People Learn*, the Committee on Developments in the Science of Learning repeatedly points out the importance of learning with understanding. Clearly, learning with understanding is fundamental to good education. That is not the question. What is a question is whether the importance of learning with understanding is new enough or distinctive enough for it to be taken as "one of the hallmarks of the new science of learning." In many ways, it has long been the holy grail of sound pedagogy. The Committee implies that it was not at the forefront of educational concern early in the twentieth century. A scholar can test such a proposition by consulting a work such as James' *Talks to Teachers on Psychology* or the *Cyclopedia of Education* edited by Paul Monroe and published between 1911 and 1914. The *Cyclopedia* has a short entry under "Understanding," to wit, "q.v. Judgment." Here the scholar must exercise the methodological forbearance of good scholarship, which Mathew Arnold called "sweetness and light," allowing sources to shine forth in their best light, looking for the sense they convey rather than the locution now favored.

[see http://www.quantonics.com/James_SPoP_Chapter_IV.html, paragraph 50 plus and minus, for another version of the "blooming buzzing confusion." Here too James' basic point is the same and he makes it very clearly: perception is complete and unified and the task of human intellectual development is to resolve it into particulars by the use and development of concepts, which added to perceptions yield conceptions. This coupled with his remarks on the extensive repertoire of instincts that he considers to be marks of the human, yields a view of infant cognition remarkably close to that touted by cognitive scientists.

¶13 Shortly, we shall return to James's work

[Key problems arising from the failure of scholarship in *How People Learn*.

In addition, the fact that *How People Learn* is the work of a select committee, comprising leading researchers in the field. Additionally, the Committee vetted the text with several researchers, even more senior. Thus it is the product of extensive peer review and its deficiencies therefore suggest that the National Research Council and its component Academies may be constituting peer panels too narrowly. With more broadly constituted peer panels, the friendly criticisms I offer here might have been made in the process by which *How People Learn* was conceived and composed.]