

# *A Walk Through Graduate Education*

**Selected papers and speeches of Jules B. LaPirus  
President of the Council of Graduate Schools  
1984-2000**

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# SCHOLARSHIP AND RESEARCH: *Gresham's law revisited*

Some years ago, in a speech entitled *Gresham's Law: Knowledge or Information?* Daniel Boorstin (1980), then Librarian of Congress, commented, "In our ironic twentieth-century version of Gresham's law, information tends to drive knowledge out of circulation. . . . The latest information on anything and everything is collected, diffused, received, stored, and retrieved before anyone can

*The influence of Daniel Boorstin's writing about knowledge and information is seen in several of the author's writings, but this one is most directly on the topic. It first appeared in Communicator in January 1996.*

discover whether the facts have meaning" (p. 3).

He suggested that one way to understand the difference between knowledge and information was to realize that while you can inform people, you can't knowledge them. That is one of the great truths in education. The integrative, synthesizing activity that produces knowledge takes place in someone's mind. You can't buy

knowledge or receive it as a gift; it is a personal possession obtained by an active process. You have to do it yourself.

Several years later, Ernest Boyer (1990) wrote *Scholarship Reconsidered*, in which he did just that. Among other things, Boyer observed that, "Surely, scholarship means engaging in original research. But the work of the scholar also means stepping back from one's investigation, looking for connections, building bridges between theory and practice, and communicating one's knowledge effectively to students" (p. 16).

Boorstin's distinction between information and knowledge and Boyer's expansion of the idea of scholarship that takes it beyond research, led me to think about the relationship between these sets of terms. For many, the term research conjures up images of scientists working in laboratories, while scholarship conveys an image of solitary figures, perhaps in libraries, pondering "over many a quaint and curious volume of forgotten lore." But these are Hollywood images. I believe there is a real and important difference between the terms. Research is something you do. Scholarship is the way you think about it. Combining this with Boorstin's idea suggests that research is a process for obtaining information and that scholarship is a process for turning information into knowledge. That is why research can be done by teams and scholarship cannot. We have research assistants; we don't have scholarship assistants. Researchers usually ask questions like where, when, who, what, how

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many, how big, or how fast. Scholarly questions are different. The most common undoubtedly are why and how, usually accompanied by two others. One is a critical question, "So what"? The other is a visionary question, "What if"?

Defining research and scholarship in this way also helps to clarify some recent discussions about graduate education. For example, an editorial in *Science* entitled "Reorientation of Research Objectives" referred to comments by John Armstrong, former vice president for research at IBM:

[T]he academic science and engineering faculty need to reevaluate the relative importance of research results and other aspects of the training leading to the Ph.D. The research results are usually in a narrow field. What the Ph.D.'s know "that is of lasting value is how to formulate questions and partially answer them, starting from powerful and fundamental points of view." (Abelson, 1994, p. 755)

Industrial research and technology managers who deal with a variety of different kinds of problems tend to agree with this point of view, recognizing that what has carried over from their own doctoral studies is not the specifics of their dissertation research but the generalizability of the scholarly process.

Academics, many of whom continue to work in areas closely related to their doctoral research, may not always remember this. Perhaps that is why one of the major issues in universities has been described for years in terms of the relationship between research and teaching, when in reality the important relationship is that between scholarship and teaching. What needs to come strongly into the classroom is not so much the results of the latest research, but how a trained scholar reads and listens critically, defines and analyzes problems, determines what the important questions are, decides what research needs to be done and how to do it, understands what the results mean, and learns from the process. These qualities should be cultivated in all classrooms at all levels.

We are going through a period of intense interest in the purposes and processes of graduate education. At the doctoral level, much of the discussion has focused on the consequences of overspecialization in teaching as well as research and on how universities might do a better job in preparing students for both of these activities. In a very direct way this is part of the message in the recent report, *Reshaping the Graduate Education of Scientists and Engineers*, from the Committee on Science, Engineering, and Public Policy (COSEPUP, 1995) of the National Academies. That report stressed the idea of a broader preparation for doctoral students, one that would give them a larger context within which to place their research specialization. The emphasis is on making students more versatile so that they have a wider range of career options available to them. But the benefits to be derived from this kind of approach can go far beyond that if students are encouraged to extend their abilities as scholars. As Boyer (1990) has commented, "The scholarship of discovery, at its best, contributes not only

to the stock of human knowledge but also to the intellectual climate of the college or university. Not just the outcomes, but the process, and especially the passion, give meaning to the effort" (p. 17).

Scholarship and Research, Knowledge and Information—these academic couplets represent the essential components of the university. Scholarship and knowledge are absolutely dependent on research and information, but the reverse relationship does not hold true. Information and research can exist alone, and when they do, they can drive out scholarship and knowledge. There is a kind of dynamic balance that can easily shift too far in the direction of short term answers and away from long term questions. But the issue is not research or scholarship. The issue is scholarly research or nonscholarly research, and in the university, there is never a reason for nonscholarly research.