

Commentary

Remarks on the changing nature of inquiry

Richard Jessor delivered the following address upon receiving the Outstanding Achievement in Adolescent Medicine Award from the Society for Adolescent Medicine in Los Angeles, California, on April 1, 2005.

I would like to express my deep appreciation to the Society for Adolescent Medicine for this extraordinary award. The recognition that it represents for our research on adolescence is important to me, and it would be treasured for that reason alone. What makes it an even more special award, however, is the fact that it comes from a Society I have long admired, a society many of whose members I have known and collaborated with over the years—Iris Litt, Bob Blum, Charlie Irwin, Roger Tonkin, David Kaplan, and Dennis Fortenberry—to name only a few.

Rather than talk about my research, with which some of you are already familiar, I prefer to use my time this morning to engage the larger enterprise all of us are involved in—advancing knowledge that can serve the welfare of the 1.5 billion young people on our planet, the great bulk of whom are growing up in the developing world.

I want to consider, today, the accelerating changes that have been underway, in recent decades, in both the nature of inquiry and the organization of knowledge because they have major implications for the grasp we can achieve on what adolescence is all about at the start of the 21st century. That grasp, as we all know, will have to encompass social contexts and social institutions, cultural tradition and cultural change, psychological dispositions and subjective identities, biological processes and physical growth, and more.

The recent changes I am concerned with had their origins much earlier, of course. Let me remind you of the remarkably prescient statement by one of the founders of modern scientific medicine, the great 19th century German physician/scientist, Rudolf Virchow. In his book, *Disease, Life, and Man*, Virchow asserted, and I quote: “Medicine is a social science in its very bone marrow” [1]. His statement signaled an exceptionally precocious readiness to supervise traditional disciplinary confines, to transcend the division between science and application, and to locate matters of health and illness in their larger social context. For the mid-19th century, such thinking is simply stunning.

Another early contributor to the more recent changes I have been alluding to was also a renowned German scholar, this time a social psychologist of the mid-20th century, Kurt Lewin. Lewin argued that science is best made in the very context of the problems it seeks to understand, and he rejected the conventional antinomy between theory and application. He urged the *theoretical* psychologist not to look toward applied problems “with highbrow aversion or with a fear of social problems,” and he exhorted the *applied* psychologist to realize that “there is nothing so practical as a good theory” [2].

Beyond the transdisciplinary perspective so brilliantly foreshadowed by Rudolf Virchow, and beyond Kurt Lewin’s salutary insistence that theory and application are bedfellows in the quest for knowledge, the more recent changes that are most apparent are those in the very organization of scientific knowledge.

Traditionally, especially on academic campuses, knowledge has been organized in packages called “disciplines,” whose boundaries were more or less clearly circumscribed. Only a few hardy souls ever ventured beyond those boundaries; those who did tended to wait until they had tenure, and the interstices between or among disciplines were left largely unexplored. The idea of a “discipline” as the fundamental way of organizing knowledge, and of “departments” as the locus for disciplines in Academe, achieved a kind of sacrosanct timelessness that was beyond questioning. I often found myself having to remind my colleagues, however, that there is actually no reference to “chemistry” or “sociology” or “economics” or “biology” in the *Talmud*, and that, in fact, these are relatively recent, 19th and 20th century ways of parsing the intellectual world.

Indeed, it is this very way of parsing the intellectual world—organizing knowledge around the traditional disciplines—that has been increasingly challenged these past several decades across all the domains of scholarship. For one concrete example, a leading sociologist, Neil Smelser, former president of the American Sociological Association, came to see his own discipline as beleaguered, and he predicted that the very term, “sociology,” will not be “denotative of an identifiable field” in the foreseeable future. Instead, and consonant with the theme of my remarks today,

he anticipated that “scientific and scholarly action will not be disciplinary in character but will, instead, chase problems. . .” [3].

What we have all been witnessing these past decades has been the emergence of *entirely new fields of inquiry*, with names that did not even exist in the academic lexicon until recently, fields like *neuroscience*, and *cognitive science*, and, indeed, *behavioral science*. These new fields tend to be located in problem-focused institutes and centers, rather than in departments, and they are exemplars of the change I am focused on. They not only transcend the disciplinary organization of knowledge, but they challenge its very sufficiency and, indeed, even its appropriateness.

The thrust toward change and the emergence of transdisciplinary organizations of knowledge has come, of course, from the never-ending quest for a firmer grasp on nature, as well as from the pressing demands of society that inquiry be responsive to its problems and needs. Those of us working on the problem of adolescence have felt both of these influences, and they are increasingly changing how we do our research.

But “change will not come easily” according to Phil Abelson in an editorial in *Science* just a few years ago. He went on to say: “The rigid departmental structure [in universities] has become outmoded. Many of the best opportunities for significant scholarship lie in multidisciplinary areas.” Abelson also reports on a letter the prestigious Kellogg Commission sent to the presidents and chancellors of state universities and colleges; in that letter, the Commission points out that society has problems; universities have departments [4]. A year later, in another editorial in *Science*, a neuroscientist took note of the fact that “The modern university is partitioned along academic lines that no longer truly reflect today’s intellectual life . . . modern knowledge systems are inseparably interdisciplinary” [5]. And in a recent issue of *Science*, there is an article arguing for yet another emerging field of inquiry, this one called “*sustainability science*.” The authors argue that “Progress in sustainability science will require fostering problem-driven, interdisciplinary research” [6].

To sum up, my thesis has been that these are changing—*even revolutionary*—times for the making of science. Inquiry is breaking free of the constraints of disciplinary boundaries; it is increasingly coming to be problem-driven, and it more frequently entails perspectives and approaches that are transdisciplinary in nature. As I indicated earlier, these are characteristics that the Society for Adolescent Medicine stands for, and they are clearly evident in its *Journal of Adolescent Health*. In symbolizing all of this for me, today’s award has won my deepest appreciation.

Let me close with an apposite quotation from the epidemiologist, Reuel Stallones. In one of his writings, he called our attention to what he described as: “a territory of especial beauty at the intersection of the biomedical and social sciences” [7]. It has been my privilege, over almost the past half century, to be able to explore that territory of especial beauty in my own search for understanding of the problem of *adolescent health and well-being*.

Richard Jessor, Ph.D.
Institute of Behavioral Science
University of Colorado
Boulder, Colorado

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