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#2 The Interdependence of Disciplinarity and Interdisciplinarity

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A Forum on Interdisciplinarity

Harvey J. Graff, Ohio State University
Jerry A. Jacobs, University of Pennsylvania
Mary Jo Maynes, University of Minnesota, and
William H. Sewell, Jr., University of Chicago

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Two author-meets-critics sessions were held at the 2014 and 2015 Social Science History Association meetings on the topic of disciplines and interdisciplinarity with the same set of commentators. Both were organized by Harvey J. Graff. The 2014 session at the Toronto meetings focused on Jerry A. Jacobs' book, *In Defense of Disciplines: Interdisciplinarity and Specialization in the Research University* (Chicago: University of Chicago Press, 2014). The same set of commentators reconvened in Baltimore in 2015 to discuss Harvey Graff's book, *Undisciplining Knowledge: Interdisciplinarity in the Twentieth Century* (Baltimore: Johns Hopkins University Press, 2015). The panelists at both of these sessions were John Guillory, New York University; Mary Jo Maynes, University of Minnesota; Janice Reiff, University of California at Los Angeles; and William Sewell, Jr., University of Chicago.

The Forum on Interdisciplinarity presented here includes the edited and revised comments of Mary Jo Mayes and William Sewell, Jr. on both books, and responses and an exchange from Harvey J. Graff and Jerry A. Jacobs. **This paper is one of the 4 papers in this series.**

Keywords: disciplines, interdisciplines, interdisciplinarity, social-science history

The Interdependence of Disciplinarity and Interdisciplinarity

Harvey J. Graff

The ubiquitous appearance of the term “interdisciplinary” (1) in current academic and educational writing suggests that it is becoming a dominant form of scholarly work. Recognizing that interdisciplinary work demands a greater command of knowledge and methodologies than individual scholars may possess, universities contend that the organization of learning, and of work, depends on and advances collaboration. These statements reveal the particular discourse — indeed, ideology — of interdisciplinarity, which asserts its transformative power and vital importance. They also suggest implicit tensions between applied research and fundamental problems of knowledge, as well as conflicts between existing disciplines and emerging ones. It is also true that universities deal inadequately with problems of organization and career tracks. Interdisciplinarity can also be a cover for downsizing faculty numbers and programs. Interdisciplinarity has a history of uses and abuses, reflected in today’s self-promotional “grand challenges.”

These complications underscore the fact that disciplinary and interdisciplinary work is inextricably linked, regardless of the assumptions of proponents and opponents. This is among the principal arguments of *Undisciplining Knowledge: Interdisciplinarity in the Twentieth Century*. (2) That each depends on the other is insufficiently appreciated. In a discourse sharply divided by dichotomies, some see the recent rise of interdisciplinarity as a reaction against overspecialization and fragmentation in the disciplines. They urge integration and synthesis. Others declare that critical problems demand collaboration among specialists from different fields and disciplines. A more complete appreciation of interdisciplinarity’s development demands a longer look backward, at least to the late-nineteenth-century origins of modern disciplines in the developing research university *and* the relationships among them. Disciplinarity and interdisciplinarity stimulate, shape, and inform each other, as the making of foundational and newer fields shows.

The approach and interpretation that I develop in *Undisciplining Knowledge* is historical. It derives from the mediation between my own experience as an interdisciplinarity scholar, teacher, and program builder across several fields and disciplines, and what I learned from studying historical efforts across disciplines and interdisciplines of the sciences, humanities, social sciences and professions, from late nineteenth and early twentieth century. There are similarities across fields but there are also key differences. Too often, for example, academic humanities ape outmoded images of large-group, well-funded science. That is more a stereotype than a model.

My definition emphasizes approaches and efforts to asking questions and solving problems, both old and new ones. It focuses on the development and application of conceptualizations, theories, sources and methods that are drawn from different scholarly areas (that may be disciplines, subdisciplines or different fields of disciplines) and aim at their integration in efforts to develop new approaches and resolve problems in novel ways. I am especially concerned with questions of *conceptualization* and *definition*; actual *relationships* within and across disciplines and fields— the most critical elements; *location* of programs and research intellectually and organizationally; and the *organization* of research and teaching within institutions.

Methodologically and organizationally, *Undisciplining Knowledge* proceeds by design through a series of comparative, paired case studies. They are designed to encompass similarity and difference over time, and across the sciences, social sciences, humanities, and the professions. They begin with the late-nineteenth-century shaping and organization of biology and sociology, and continue through the humanities and communication, social relations and operations research, cognitive science and new histories, materials science and cultural studies, and, most recently, bioscience and literacy studies.

In my view, questions and problems are central. This contrasts with what I consider many myths. One myth is that interdisciplinarity is based on the “integration” of disciplines writ larger or requires “mastery” of multiple disciplines. Another is that there is one path toward interdisciplinarity — a large group and expensive science. As the case studies demonstrate, there is no one formula that has a higher chance for success. Nor is interdisciplinarity new. It is part of the history of the modern research university and the development of disciplines from the late nineteenth century on. Too often we frame disciplines and interdisciplinarity as opposed; the reality is that one depends upon the other. Finally, it has become common to oversell and inflate the promise of interdisciplinary research. It is declared that all-out attacks on medical and social problems, such as the “war on poverty,” must be interdisciplinary. Yet often the research being done is not, and large claims — made to raise cash and bolster institutions and careers — are inappropriate or wasteful for the state of knowledge in certain areas.

Careful, well-grounded and knowledgeable interdisciplinarity can be — but is not guaranteed to be — a valuable route to answering important questions and resolving or at least redefining problems, both new and old, large and small. It can propel teachers and researchers toward fundamental and more particular criticism and rethinking. It can lead to new approaches to old questions. It can promote conversations and collaboration, but not require groupthink or group work. It can promote learning if researchers and teachers do their homework and learn at least the basics of the different fields in which they seek to work, integrate and contribute. This is a matter of concept, theory, method, findings and arguments, as they shape and reshape each other. Interdisciplinarity is hard to do well, but worth the effort, even when the results are not the “breakthrough” too often overoptimistically promised.

Among the confusions that have a palpable consequence in research and education today are failure to distinguish between or to differentiate among general education at the undergraduate and high school level, and advanced research across the disciplines and what I call clusters of disciplines (sciences, humanities, arts, social sciences, professions, etc.).

Even more worrisome to me is faddish, “faux” and unknowledgeable purported interdisciplinarity. This is common, as *Undisciplining Knowledge* shows. It involves taking conclusions from a field (often, at present, cognitive science or evolutionary biology) and “applying” them to almost any other time or place or question with scant concern for the basis of those arguments, their credibility, or their relevance. This is imaginary or free-floating interdisciplinarity — poor scholarship. And it is harmful to the cause of serious interdisciplinarity. On the other side is the now old condemnation that “interdisciplinarity is impossible because no one can master more than one discipline.” Can anyone “master” one discipline?

The long and complicated history of interdisciplinarity supports a strong argument to limit use of the word and its associated vocabulary. This is necessary in order to advance its provenance and power. Those who pronounce transdisciplinarity or, more recently with respect to bioscience, convergence to be “beyond interdisciplinarity” are seldom aware of the baggage that both those terms carry. Metaphors too commonly take the place of understanding.

These are very real questions in 2015, just as they were in 1980, 1950, or 1910. What is at stake is nothing less than the framing of efforts to make progress on major intellectual and social problems; issues of public policy; expectations and anticipations; the allocation of resources, including the time and efforts of people and institutions; the articulation of organizations and structures; and professional careers and human lives.

These concerns influence my response to Jerry A. Jacobs’ *In Defense of Disciplines: Interdisciplinarity and Specialization in the Research University*, a book that we need for the rigor of its research and the strenuousness of its arguments. There is revealing new information and necessary clarity and clarification in these pages. Jacobs’ critique of some of the most egregious assaults on the disciplines is especially noteworthy. The case studies are valuable.

As the book's title suggests, its strength lies in its extended examination of academic disciplines. "Skeptical" about the "promise of interdisciplinarity," Jacobs casts his variety of evidence and arguments against those who assert that the arts and sciences are "obsolete" and that research universities should be organized "along interdisciplinary axes rather than around arts and science disciplines." Toward that end, he critically reviews what he calls "the case for interdisciplinarity," a particularly strong form of a wide spectrum of opinion and efforts in support of one approach to interdisciplinarity among many.

After burrowing through "the jungle of terminology," which is "just too thick," and the arguments to which it is attached not always carefully or clearly, Jacobs focuses on the extent of communication across fields. This is his most signal contribution. He turns to the kind of bibliometric analysis of citations in databases of scholarly periodicals, now common in library and information science. He uses the sources and methods for a novel approach to one level of scholarly exchanges, or more literally the presence of citations from one area of scholarship in the published literature of others. He also categorizes and counts new journals. For Jacobs, this is striking evidence to support his contention that "communication across fields is not only common but remarkably rapid. The spread of techniques and ideas between fields is the rule and not the exception." This analysis accompanies a parallel case that argues for the "vibrant forces for innovation at work within disciplines."

This is important research and merits wide discussion with comparisons within and across disciplinary clusters and over time. At the same time, by the nature of the sources and the methods of analysis, it cannot address or specify the actual substance of the "spread of techniques and ideas," the nature of the communication or the exchange themselves — or any change in practices (in education, for example). Moreover, these findings as well as Jacobs' fascinating arguments that interdisciplinary "ventures over time come to emulate established disciplines, especially in terms of developing their own journals, professional associations," and the like, may also support a moderate case for the success and value of interdisciplinarity, especially if defined flexibly and historically.

In Defense of Disciplines and *Undisciplining Knowledge* complement each other in basic ways. In fact, I have planned a new graduate seminar in which I will teach both books in relationship, along with major examples of interdisciplinary scholarship of varied types.

At the same time, our views and our books differ. In part, this is a question of (inter)disciplinary, methodological, evidentiary, and interpretive difference. I write as a historian, Jacobs as a sociologist. His frame derives from a social (scientific and intellectual) movement perspective, mine from comparative case studies drawn across the humanities, social sciences, and professions, set in the context of more than one hundred years of academic development. We agree fundamentally on the centrality of disciplines. At the same time, we disagree in our understanding of both interdisciplines and interdisciplinarity. We agree, perhaps most explicitly on the extent of faddishness, excessive claims, and dangers of some of the discourse and the practices of self-proclaimed interdisciplinarity. But I see less ongoing opposition between disciplines and interdisciplines, especially in practice. Our conceptions differ.

I argue strongly that neither disciplines or interdisciplines, nor disciplinarity or interdisciplinarity, can be understood apart from each other. This is especially the case with respect to their interrelationship in the making of the modern research enterprise. Following the differences, as well as the similarities among my case studies across fields and over time, I am hesitant to generalize about interdisciplinarity in general. I see more differences than Jacobs. And when we return to the arts and sciences, I emphasize the need to differentiate between nonspecialist, integrating general education and specialized advanced research. Among the complications is the need to distinguish, in the least, between multi-, cross-, and interdisciplinary efforts.

I would not characterize my judgments of interdisciplinarity as "ambivalent." To the contrary, I strongly endorse well-developed, knowledgeable efforts to address significant problems and answer important questions in novel ways that draw from more than one field or discipline. I see that

as a fundamental and long-standing engine in the pursuit of knowledge and the ongoing making and remaking of academia itself.

Notes

1. Much writing about interdisciplinarity ignores the issue of definition almost entirely. At the same time, there are endless lists of typologies and almost 57 varieties, ranging from pre- to postdisciplinary, and surprising things in between (adisciplinary, antisciplinary, metadisciplinary, supra-interdisciplinary, omnisciplinary, transdisciplinary).

2. Some readers comment on my title: “undisciplining knowledge.” It is meant to be *ironic*. Originally, there was a question mark after “undisciplining knowledge.” My intention was to problematize the notion and notions — plural — of moving out and beyond disciplines. I further intended to be *paradoxical* about the relationships between and among disciplines and interdisciplines on the one hand, and, on the other hand, the many forms of relationships from interdisciplinary to cross- and multidisciplinary which I take seriously, *and* a-, anti-, post-, and transdisciplinary, which I do not. Finally, I want to play with (perhaps even parody) those notions that unfairly and ahistorically reject so-called “traditional” forms and organization of knowledge and the “disciplines as we know them.”

Harvey J. Graff is Ohio Eminent Scholar in Literacy Studies and Professor of English and History at The Ohio State University. He joined OSU in 2004, and directs the [Literacy Studies @OSU](#) initiative, a university-wide interdisciplinary program. His most recent book is *Undisciplining Knowledge: Interdisciplinarity in the Twentieth Century* (2015) and he has just completed *Searching for Literacy: The Social and Cultural Origins of Literacy Studies*. He was president of the Social Science History Association for its 25th anniversary in 2001.