SCIENTIFIC APPROACHES

The domain of disciplines

Historical case studies offer insights into the future of interdisciplinary scholarship

By Yael Peled

Interdisciplinarity,” like “multiculturalism,” is a notion of part-whole relations that is more often invoked than examined. Harvey J. Graff’s *Undisciplining Knowledge* is therefore a welcome addition to a surprisingly limited pool of existing titles on this topic. The book aims to counter the “accepted narrative” of interdisciplinarity in the modern research university as a linear and almost teleological process, often characterized by reductionism and little appreciation of history. In such narratives, the natural sciences are often taken as paradigmatic, and “oppositions and dichotomies stand in for critical definitions and in-depth, comparative research.”

Graff’s approach, by contrast, adopts an integrated historical, social, and contextual framework, which explores, in chronological order, the development of six pairs of interdisciplines: (i) genetic biology and sociology; (ii) the humanities and communication; (iii) social relations and operations research; (iv) cognitive science and new histories (contemporary approaches to historical processes that emphasize social and cultural factors); (v) materials science and cultural studies; and (vi) bioscience and literacy studies.

Graff offers the reader a complex tapestry of the history of interdisciplinary knowledge production and institutionalization. He discusses topics including the convergence of fields such as zoology, botany, bacteriology, and physiology that led to the emergence of biology; the impact of World War II and the Cold War on the field of operations research; and the diverse range of intramural (students, administrators, and researchers on the historical emergence of different interdisciplines. One particularly illuminating case study examines Talcott Parsons’s work at Harvard’s Department of Social Relations in the 1940s. Despite bringing together researchers from sociology, social and clinical psychology, and social anthropology in this newly established department, Parsons’s own work dominated the intellectual agenda, effectively rendering the “project” of social relations as an interdisciplinary much less collaborative and synergistic than many had hoped.

The relationship between researchers and frameworks—and, more broadly, between fields and disciplines—is at the heart of interdisciplinary research and epistemology. And yet, as Graff repeatedly points out, it is very rarely discussed or debated. One of *Undisciplining Knowledge*’s major contributions is its careful and attentive mapping of the different paths to interdisciplinarity and the broader conclusions that may be drawn from the commonalities shared by the book’s 12 examples. Graff’s framework offers a fine-grained analysis of the substance and structure of interdisciplinarity, its continual interdependence on established disciplines, the factors that make some interdisciplines more successful than others, and the various models for interdisciplinarity. His specific pronouncements are certainly debatable, yet his proposed “taxonomy” provides a much-needed conceptual vocabulary to facilitate discussion.

Although heavily focused on the United States, *Undisciplining Knowledge* offers a detailed and illuminating account of the historical and intellectual forces that shaped interdisciplinarity in the 20th century and those that continue to do so today. These include the tension between specialization and generalization; the quest for epistemic unity and the danger of reductionism; the uneasy relationships between expertise and authority; and the complex links among research agendas, curriculum development, and expectations of practical applicability.

Graff emphasizes the dynamic interdependence between knowledge, scientific epistemologies, and (inter)disciplinarity, while remaining wary of proposing any simple definitions. Instead, he stresses the importance of egalitarian exchanges and the role of history and the humanities in the study of interdisciplinarity. Although *Undisciplining Knowledge* provides insightful answers to largely underexplored questions, its main contribution lies in refining and reframing these questions for the benefit of historians of science and interdisciplinary researchers.

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168 9 OCTOBER 2015 • VOL 350 ISSUE 6257