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Jerry Jacobs, "In Defense of Disciplines: Interdisciplinarity and Specialization in the Research University". Chicago: University of Chicago Press, 2013, 288 pp.

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Book Review

Jerry Jacobs, *In Defense of Disciplines: Interdisciplinarity and Specialization in the Research University*. Chicago: University of Chicago Press, 2013, 288 pp.

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Jerry Jacobs's *In Defense of Disciplines* is a data-driven look at how knowledge production is organized in the universities, within and across disciplines. The book contains a number of new and notable findings and a well-reasoned critique of interdisciplinarity. Jacobs's central theses are: (a) that the disciplines as they currently exist do a good job of sharing knowledge (the critique of disciplines as "silos" is misplaced;) (b) that interdisciplinarity can be difficult to implement in practice even when institutional will exists; and (c) that prestige and policy influence accrue less readily to successful interdisciplinary endeavors than is often supposed (the key empirical contrast here is between interdisciplinary area studies and education research, on the one hand, and the inward-looking discipline of economics, on the other.)

The factual findings support these arguments. Cross-citation between disciplines already occurs at high rates for many disciplines (e.g., 31% of citations to chemistry journal articles, 38.3% of citations to biology journal articles and 34.5% of citations to psychology journal articles appear outside of those respective fields) [p. 81,] but on the other hand, the social science discipline with the most policy influence by far is also the most insular (80.9% of citations to economics journal articles occur within the field) [p. 82.] Jacobs argues that important findings in the established disciplines of psychology and sociology have flowed relatively freely into the interdisciplinary field of education. As evidence for this, he shows citation counts over time ("receptivity curves") for influential texts by Jean Piaget and Albert Bandura (psychologists), James Coleman and Pierre Bourdieu (sociologists) and for the advanced statistical techniques of structural equation modeling and hierarchical linear modeling [pp. 105-112.] Meanwhile, interdisciplinary projects are prone to fragment or remain dependent on an established disciplinary base. As an example of fragmentation, Jacobs cites the twenty-one distinct research centers focused on various aspects of national security at Penn State [p. 93.] As an example of an interdisciplinary venture that achieved at most partial independence from the core disciplines, Jacobs cites American Studies programs, which have produced important scholarship since their inception in the 1940s but still tend to be staffed by faculty with PhDs in History and English [pp. 153-187.]

Jacobs's coding of "disciplines" and "interdisciplinarity" is informative on its own terms. He identifies eighteen distinct liberal arts disciplines [p. 31,] all of which, with the exception of computer science, have been recognizable fields of inquiry since at least the early Twentieth century. He notes that there is less equivalence than commonly supposed between disciplines, departments and degrees. Out of a sample of 383 schools, Jacobs finds that 70% offer an undergraduate degree in physics while only 45% have a stand-alone physics department [p. 43;] philosophy is in a similarly precarious institutional position at the smaller and less-elite schools.

With reference to the crowded field of peer-reviewed academic journals, Jacobs usefully distinguishes six types of interdisciplinarity, namely: (a) "disciplinary plus" approaches, characteristic of journals that have a strong focus on one of the liberal disciplines but publish papers from related fields; (b) "specialized interdisciplinarity," characteristic of journals like *Journal of the North Atlantic*, an area studies journal, and *Heritage and Society*, which focuses on problems related to the preservation of cultural heritage; (c) "social-cultural comprehensive" interdisciplinarity, which is characteristic of all manner of systematic or generalized interpretive projects in the social sciences; (d) "academic universal" interdisciplinary, characteristic of journals like the *International Journal of Research and Review*, which self-describes as "publish[ing] empirical reports in the various fields of arts, sciences, education, psychology, nursing, computer science, and business;" (e) "problem solving" interdisciplinarity, which tackles particular social problems, narrowly or broadly defined; and finally, (f) "theoretical" interdisciplinarity, which connects substantively diverse topics by relying on a single theoretical framework, as in the journal *Rationality and Society* [pp. 64-67.]

Jacobs argues that the disciplines as they are currently structured in the universities are well equipped to address complex interdisciplinary problems like climate change and education reform. This is a more speculative claim than the theses listed in the opening paragraph of this review, but it is equally important, on its own terms and as a buttress to Jacobs's overall critique. Specialist scholars do not need to be aware of one another's work to contribute effectively to a collective enterprise, he argues: in the realm of climate change research, "an oceanographer who refines models of sea currents does not necessarily need to be at the cutting edge of new battery technologies…those who study access to water in sub-Saharan region [sic] do not need to be at the forefront of research on polar bear populations" [p. 130.] The same point is made with respect to the research that made the agricultural "green revolution" possible [pp. 131-134.] These propositions are instructive and difficult to dispute, but that is in part because Jacobs does not take on especially controversial hypotheticals to make his point.

The really important counterfactual question that arises here – are there possible institutional arrangements that would be better able to solve intellectual and policy problems than the existing core disciplines? – is difficult or impossible to answer decisively. In any case, the true state of affairs is probably different in different local contexts. Maybe the existing arrangement of disciplines is optimal for producing policy-relevant knowledge with respect to climate change but not with respect to the threat of viral pandemics. Or vice versa – it is extremely difficult to know how well we are doing relative to how well we might be doing. An additional layer of complexity appears when we attempt to bridge the gap between intellectual problems and policy problems. Education research is something of a cautionary tale in the book. Graduate schools of education are one of the clear success stories of institutionalized interdisciplinarity in the modern American university, but many of the practical failings of public primary and secondary education in the United States have stubbornly persisted.

Jacobs is a careful writer, and he makes important qualifiers working out his response to the counterfactual question articulated above. First, "interdisciplinarity is everywhere" in the universities already [p. 123.] The baseline situation is that the work of the universities and the professional identities of most scholars remain based in the

small core of liberal arts disciplines, but those disciplines are porous and much important work already has an interdisciplinary character. Second, with respect to the key example of global warming, Jacobs notes that his "discussion […] remains speculative in part because the research and policies that will contribute to solving this problem still lie in the future" [p. 131.] Third, he recognizes that disciplinary boundaries and identities change over time – that "today's greatest interdisciplinary hits become tomorrow's conventional lines of inquiry" [p. 135.] Jacobs also, appropriately, gently suggests a shift of the burden of proof in this debate to those who advocate for a radical reorganization of knowledge in the academy. Discussing social psychologist Donald Campbell's critique of the "ethnocentrism of disciplines" [p. 13,] Jacobs notes that Campbell's argument is weak on data where it is most needed: Campbell "does not offer a list of the important topics that he thought were neglected by scholars" [p. 15.] The measured and cautious tone of these passages is characteristic, and a characteristic strength, of *In Defense*. Jacobs insists on clear evidentiary support both for his own claims and those of his critics. He does not overstate his case.

Normative debates about the value of disciplines immediately and necessarily raise a host of other expansive questions. Knowledge for what? Education for what? What new models of knowledge production and dissemination are made possible by technological changes like electronic communication and the availability of big data? What hard institutional constraints will favor the persistence of old models of knowledge production in new interdisciplinary endeavors? These questions are important and inviting; it is easy to develop strong opinions on them, which is perhaps why so many entrants in debates over disciplines and interdisciplinarity tend to eschew data analysis in favor of editorial commentary on opportunities and risks. Jacobs does a good job of keeping his inquiry focused without trivializing or wholly ignoring the bigger questions. However, if anything is missing from the argument, it is a more extensive and explicit engagement with these questions. In some places, more in this line is called for than Jacobs is prepared to give, and the narrowness of his focus can make his defense of disciplines seem unmotivated. He argues, for example, that

> over the long run, the cumulative effect of a systematic joint appointment strategy [for faculty in research universities] would be the undermining of disciplinary coherence. In the case of sociology, for example, joint appointments could be made with any number of fields [including] women's studies, African American studies, and health and society programs […] political science, anthropology, social work, criminal justice, and education … Over time the core group of faculty dedicated to sociology as a discipline would most likely erode, and the ability of the department to advance sociological inquiry would be undermined [pp. 218-219.]

The ready response of the skeptic here is, "what is sociological inquiry, and why does it matter if anyone is conducting it or not?" Jacobs elsewhere admits that sociology has only a thin basis of internal coherence that extends to the entire discipline, if it has any at all [p. 33.] One might be able to provide a compelling defense of sociology as a disciplinary enterprise, but it would have to involve a more extensive conceptual argument than Jacobs gives, and probably also more attention to the historical contingencies that produced sociology in its current form.

Elsewhere Jacobs approvingly quotes Louis Menand writing in defense of the French department at the University of Albany when it was on the administrators' chopping block: "the loss of any department is a loss to every department at that institution […] It looks like you are merely clearing away some of the underbrush. But you are damaging the ecology of the entire institution" [p. 80.] Menand's argument as it is presented here is persuasive on the point that one cannot think of departments as independently distributed within the university, but it is not persuasive that disruptive change is never called for. The ecology metaphor cannot be taken very far. Ecologies flourish on the basis of symbiosis, but also on the basis of internal competition and sometimes extinction. External actors consciously striving to maintain equilibrium do not provide a reliable guide for how to preserve healthy ecologies – at least not yet. To the administrator (or student, or taxpayer) weighing opportunity costs, Menand's point is too rhetorically one-sided to be ultimately convincing.

At the conclusion of the book, Jacobs gives a short statement of how his "ideal university" would be structured: "central administrators would leave the system of discipline-based departments alone. Exciting new intellectual opportunities […] can be fostered under the rubric of centers and institutes … In rare instances in which a genuinely new field emerges, such as the emergence of computer science as its own field, it will become its own department" [p. 224.] It is left to the reader to fill out the details this ideal vision with reference to the numerous examples – physics and astronomy, nanotechnology, American studies and area studies, sociology and its many associated applied fields, etc. – that are raised throughout the book. Much, then, is left up to the reader to decide. There is little reason to expect that Jacobs's readers will all reach the same conclusions about where institutional and intellectual resources ought to cluster, but we are better off, and perhaps more likely to reach agreement, now that Jacobs has elaborated the factual grounds on which that debate must take place.

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