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SUSTAINABLE KNOWLEDGE

A Theory of
Interdisciplinarity

Robert Frodeman





Sustainable Knowledge

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▶ **Sustainable Knowledge:
A Theory of
Interdisciplinarity**

Robert Frodeman

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1

Introduction

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I A parable

In *Walden*, Thoreau tells the story of an Indian who goes door to door in Concord selling the baskets he's woven. He finds no buyers: while the baskets were beautiful, the man had not taken the trouble to make them worth anything to his neighbors. Academics have taken a similar approach to knowledge. They too have produced objects of great subtlety and beauty. But in too many cases they have not tried to make their research relevant to anyone beyond a disciplinary cohort. They have mostly followed Thoreau's path: "instead of studying how to make it worth men's while to buy my baskets, I studied rather how to avoid the necessity of selling them."

Thoreau sketched out the basics of a disciplinary approach to knowledge production. It's an approach that, despite its considerable merits, is breaking down today. Increasingly academics find their productions criticized and dismissed, their work habits called to account, and their funding cut. Society, it seems, believes it is getting a poor return on its investment in university research.

Sustainable Knowledge offers an account of this trajectory, the growing quandary in academic knowledge production that reveals itself in terms of the demise of disciplinarity. It is a predicament that manifests itself in a number of ways: as a crisis of knowledge overproduction; as a lack of larger relevance and social applicability; and as the forfeiture of authority, autonomy, and status among academics of all types.

Take the crisis of overproduction. Books and articles are seldom read with the care that's gone into the writing. No one can possibly keep up with the volume of material being produced. Our earlier way of dealing with disciplinary overabundance, through subdivision, Adam Smith applied to academic life, has been swept away by the epistemic deluge. Faced with a super abundance of knowledge in every subfield we divide and divide again, while the problems we face are increasingly integrative in nature. As a result disciplinarity – that is, knowledge production that limits its responsibilities within disciplinary boundaries – has become ineffectual, anachronistic, and defunct. It remains to be seen if interdisciplinarity can be any more successful.

This by design is a short book. One should expect no less for a volume concerned with the overproduction of knowledge. I have tried to make each sentence worth the reading, and to limit the narrative to matters where I have something distinctive to add. There is a rich and varied

literature on interdisciplinarity that the reader can consult; there is no need to repeat the points made in those volumes.

II On the use and abuse of knowledge

We would serve history only so far as it serves life; but to value its study beyond a certain point mutilates and degrades life.

Nietzsche

In scholarly parlance ‘interdisciplinarity’ refers to the integration of knowledge across the disciplines. This contrasts with the side-by-side juxtaposition of different types of knowledge, what is known as multidisciplinary, and the coordination of knowledge production with parties beyond the ivy walls of the academy, which goes by the name of transdisciplinarity. In what follows, however, I will usually follow the common practice and use interdisciplinarity as an umbrella concept that includes all those approaches that take us beyond a disciplinary approach to things. This is in keeping with the social fact that interdisciplinarity usually refers to a vague but omnipresent feeling that something decisive has changed about academic knowledge.

In its basic usage, then, interdisciplinarity is about many things. But on my view interdisciplinarity has a core meaning: it is about the most anti-modern of ideas, the notion of limit.

Now, disciplinarity is also about the concept of limit. Disciplines rely on boundaries to block off most of the world in order to pursue infinite knowledge within a limited domain, ideally with no outside interference. Interdisciplinarity breaks down those boundaries, but at the cost of limitations to understanding and expertise. Both disciplinarity and interdisciplinarity play across the registers of finitude and infinity in a Hegelian fashion. Interdisciplinarity can thus be described as a form of dilettantism – but that’s judging the matter from the perspective of disciplinary knowledge, which does not seek as a matter of course to draw out the larger connections between things. And so while true, this criticism of interdisciplinarity makes as much (or as little) sense as saying that disciplines are isolated. Of course they are; that’s what constitutes their epistemological *bona fides*.

Nevertheless, interdisciplinarity is about limit in a quite telling way: interdisciplinary knowledge production is limited by its need to be relevant to a specific problem or need at hand. Whereas disciplinarity

outlines an infinite research project, a theoretical digging without end, disciplinarity is in this sense ungoverned.

These pages try to make sense of a set of intuitions concerning the future of academic knowledge. What is the rightful place of knowledge in our lives?¹ Is it possible to have too much as well as too little of the stuff? Should knowledge production be governed by an Aristotelian mean? And how do we manage academic knowledge production under the vastly changed circumstances of 21st-century life?

In part I take inspiration from Nietzsche's *On the Use and Abuse of History*, which asks similar questions about historical knowledge. Of course, across his entire *oeuvre* Nietzsche asks about the purpose of truth and the psychological wellsprings of knowledge:

What really is this "Will to Truth" in us? ... Why not rather untruth? And uncertainty? Even ignorance? (*Beyond Good and Evil*, 1886/2003)

While Nietzsche's concerns often centered on individual psychology, the focus here is more political in nature, probing the structural and institutional elements of the search for knowledge.

This work also shares Nietzsche's suspicion of the often-pious evocation of the nobility of the search for knowledge. 'Curiosity-driven' research is celebrated for its serendipitous results, but not all surprises are salutary. Curiosity was once considered a dangerous temptation; in modern culture it has become, in Einstein's words, something holy. There is something wonderful about "following the bent of one's genius no matter how crooked" (Thoreau). But curiosity should not function as a means of shielding academics from recognizing their public responsibilities.

To put one of my main points straight up, I believe that the period of infinite, encapsulated, largely autonomous and *laissez faire* knowledge production that characterized the last 150 years is coming to an end. There will be no total cessation, of course, nor should there be. But for a number of reasons – budgets, the dangers of technoscience, cultural disruption, and the irony of increased knowledge bringing us increased uncertainty and ignorance – the question of epistemic limit is likely to force itself on our attention. The pursuit of knowledge is no longer an unambiguous good – if it ever was.

It will become clearer that society can suffer from too much knowledge as well as too little, and that we should question the assumption that the answer to every one of our challenges is: more knowledge. The age now

passing away may come to be viewed as an era of epistemorrhea. To frame the point somewhat differently, the problem isn't only the absolute amount of knowledge, but also how knowledge is (or is not) balanced with other neglected qualities such as courtesy, solidarity, and quietude.

I am aware of the self-contradictions that this argument is liable to. It is hard to speak of silence, or to advocate the end of advocacy. Similarly, this is a work of knowledge that seeks to question the further production of knowledge. Some wags may suggest that I should honor my own insight and lapse into silence. To be clear: I remain a fan of knowledge. I enjoy producing and consuming it. In fact, I have never been quite sure what to do with life other than try to learn more about it.

Nonetheless, things are badly out of whack today. We have unrealistic if not millennialist assumptions about what we can expect to gain from additional knowledge (see Ray Kurzweil). As IBM argues in its 'Smarter Planet' campaign, it certainly is possible to use knowledge better. But this should not distract us from the fact that much of life is not about processing information. It's about learning how to be kinder, more open-minded, and fairer. Like William Buckley – not typically one of my heroes – albeit in a different context, I too seek to stand athwart history and yell “stop!” Or at least “slow down,” introducing into our conversation the question of whether we have enough, or too much knowledge.

It's a point that Bill Joy raised in his article 'Why the Future Doesn't Need Us' (Joy 2000). That article should be required reading for all students entering college. It could serve as a useful antidote to the endless boosterism of knowledge culture, which has never seen a problem that cannot be fixed through the creation of additional knowledge.

III The book

Sustainable Knowledge develops two overall themes. First, it offers an account of the university and of contemporary knowledge production framed in terms of four core concepts, those of disciplinarity, interdisciplinarity, transdisciplinarity, and dedisciplinarity. Second, it reimagine the role of philosophy both within the academy and across society.

Concerning the first, the modern university system as it was created in the late 19th century and developed across the 20th century was built upon a set of assumptions rooted in the notion of disciplinarity. Today the social, economic, epistemological, and technological

conditions that supported those assumptions are breaking down. This is generally recognized, which is why interdisciplinarity has become such a buzzword.

But accounts of these terms too often slip off the main point, for example, into discussions of methodology, when what is needed is a historical and cultural critique of the changing role that knowledge is playing in culture. This is what I seek to offer here. I argue that knowledge production needs to be framed in environmental terms. Knowledge production has become unsustainable; academic sustainability forms an essential element in any serious attempt at sustainability overall. This is why the fourth chapter is titled Sustainability rather than Transdisciplinarity.

Second, I argue that the changes affecting the knowledge industry today highlight the inadequacy – indeed, the historical absurdity – of 20th-century philosophy and the humanities generally. We live in a deeply, irretrievably technological age; in what might be seen as an irony but which naturally follows, philosophy and the humanities have never been so necessary to our personal and public lives. But at this very moment the humanities have never been so marginalized. The humanities themselves are largely responsible for this situation: as they have constituted themselves across the 20th century, philosophy and the humanities have become peculiarly ill-suited to addressing the challenges we face both within the academy and abroad in society. Difficult as it may be to try to reorient the situation at this late date, there is nothing else to do but try. The humanities must reinvent themselves, taking on the Socratic task of providing a historical and philosophical critique of society.

These themes are elaborated upon across four chapters, respectively titled Disciplinarity, Interdisciplinarity, Sustainability, and Dedisciplinarity.

Disciplinarity offers an account of the disciplinary regime of knowledge production – its origins, conceptual assumptions, and current breakdown. What defines disciplinarity, both historically and conceptually? What purposes did it serve? What are the forces that are bringing about its end? This analysis emphasizes a point that is generally neglected, the crucial role played by the concept of peer review, which has functioned as the principle of governance of the disciplinary academy.

Interdisciplinarity provides an exposition of the concept of interdisciplinarity. I survey the strengths and weaknesses of some of the leading thinking on the concept over the past 30 years. The chapter also explores

two central motifs to interdisciplinarity as it has developed in the late 20th and into the 21st century, the concepts of method and rigor. In response, I offer an account of interdisciplinary virtues that is rooted in the thought of Aristotle and Heidegger.

Sustainability explores how we can best understand the concept of transdisciplinarity – actually a more crucial term than interdisciplinarity in understanding our current situation. I frame my argument in environmental terms, arguing that sustainability should become the master trope of transdisciplinarity. This section concludes with the claim that the central element of transdisciplinarity, aka the coproduction of knowledge, implies the recognition of limits to knowledge production – necessarily a repugnant notion for the academic status quo.

Dedisciplinarity argues for the dedisciplining of philosophy, and by extension the humanities. Disciplinary philosophy constitutes a category mistake: philosophy is not, or at least should not be exclusively a regional ontology (as are the sciences). I offer an account of the evolution of this mistake, and discuss the power and relevance that a dedisciplined approach to philosophy can have to culture at wide – with the added bonus of opening up new job possibilities for philosophers and humanists generally. Toward that end I propose the notions of the philosopher bureaucrat and the field philosopher as innovations necessary for refurbishing the role of the philosopher in society.

The book then concludes with an *Epilogue* that offers a narrative of the personal origins of the argument presented here.

This argument covers a great deal of ground. I hope that its brevity increases its readability, although I remember Kant's point that many a book would have been a briefer read if it had been longer. I have at points sacrificed depth of detail and scholarship for breadth of scope (what strikes me as a fair tradeoff). Part of the ideal of the pre- and post-disciplinary philosopher is to be provocative, to usefully and artfully outrage. This work will be a success if it spurs useful refutation as well as elaboration.

Note

- 1 I often hear of the need to distinguish between data, information, and knowledge. The only distinction that strikes me as pertinent is the one between any and all of these three and wisdom. The neglected question is: what is the relation between knowledge and living well?