

# Scoping a Justificatory Narrative for Design Practice in Research: Some Epistemological Intersections in Dewey, Wittgenstein, and Heidegger

Brian Dixon

Design research is ambiguous on the role of philosophy. On one hand, there are attempts to forge connections, draw inspiration, and ultimately strengthen the intellectual bearings of the field. On the other hand, there is an absence of broad perspectives, comparative studies, or, indeed, anything approaching a general consensus.<sup>1</sup> It would appear that within design research, at least, philosophy is condemned to sit at the periphery of discourse, making an appearance in occasional references rather than definitive statements; something to be drawn on to reinforce an argument rather than a subject to be examined on its own terms. Thus, we are left with little bits and pieces of the subject, tiny fragments that offer us an insight into particular philosophers' perspectives but nothing substantial to demonstrate where the arguments converge or diverge, where the themes are similar or dissimilar.

At first, such a situation may not seem to present much difficulty. Why would philosophy—or for that matter the relationship between particular philosopher's perspectives—be of any consequence to design researchers? What would it matter if all that exists are partial views and glimpses of wider arguments? After all, one might venture, design research is concerned with real-world practice, not intellectual quandaries. Issues relating to epistemology might be relevant from time to time but are not concerns worth investigating in holistic, disciplinary terms.

Although I acknowledge that it would not be appropriate to foreground philosophical questions in design research, I also argue that such considerations bear more than occasional relevance. The thing is that design research claims distinction as a mode of knowledge production. It is special—its adherents argue. Unlike what we might call the “classical” sciences, it does not aim to merely describe “what is” to predict; rather, in certain formulations (particularly where design practice is integrated within the conduct of the research), it also allows for imagination and transformation, introducing new meanings and presenting new

---

1 Ben Matthews and Margot Brereton, “Navigating the Methodological Mire: Practical Epistemology in Design Research,” in *The Routledge Companion to Design Research*, ed. Paul Rodgers and Joyce Yee (Abingdon: Routledge, 2015), 151–62.

realities.<sup>2</sup> Ideas are proposed, things are made and tested—novel products, services, and experiences are fleshed out—and something that was not previously possible becomes possible.<sup>3</sup> From this perspective, the world isn't simply a static object to be understood and represented but is an ongoing project to be realized and bettered. This positioning marks a radical break from traditional modernist conceptions of what it means “to know” and, indeed, what constitutes knowledge.<sup>4</sup> As a consequence, design researchers are called on to attend to the narrative that justifies and marks their vision such that it might be readily communicated.

Some might argue that it is possible to disregard philosophy in this case, that one should simply demonstrate the process by which such knowledge is produced. Here we would see that as with any other form of knowledge production, all that is required is an effective presentation and defense of robust data, evidence, and claims.<sup>5</sup> However, to take such a course is to sideline the distinguishing factors. The potential of imagination and transformation—of proposing, making, and testing—are lost to procedural outline. Design research becomes just another approach among many.

If the distinguishing factors of certain aspects of design research are to be articulated so that those in unrelated disciplines might be convinced of their value, then the design research community must map its emergent theory of knowledge against the alternatives, grounding any differences and opening up dialogue. In this way, and only in this way, the legitimacy and value of the offering becomes clear. Here, philosophy is not an indulgence, something that might help. It is an essential framework that allows the conversation to take place.

However, to clearly articulate design research's distinguishing factors through philosophy is no easy task. In fact, it is a grand challenge. An exposition of individual philosophies—the bits and pieces available to us through present scholarship—may support this project, but on their own, they will not suffice. To convince those beyond design research, the bits and pieces must be brought together to reveal the full force of the underlying argument. This requires broad perspectives, comparative studies, and, in the longer term, (gradual) moves toward a general consensus.

In this article, I aim to contribute to the beginnings of such efforts by offering a broad perspective on some of the intersections between three key twentieth-century philosophers—John Dewey, Ludwig Wittgenstein, and Martin Heidegger. Each can be seen to have developed profoundly original insights, which—like design research involving practice—marked a split from convention, opening up a series of striking new horizons in thought that

2 See, for example, Richard Buchanan, “Design Research and the New Learning,” *Design Issues* 17, no. 4 (Autumn 2001): 3–23; Richard Buchanan, “Wicked Problems in Design Thinking,” *Design Issues* 8, no. 2 (Spring 1992): 5–21; and Ilpo Koskinen, John Zimmerman, Thomas Binder, Johan Redström, and Stephan Wensveen, *Design Research through Practice: From the Lab, Field, and Showroom* (Burlington MA: Morgan Kaufmann, 2011).

3 It is acknowledged that this general outline bears much in common with the concept of Mode 2 knowledge production, where research takes place in context. See Michael Gibbons, Camille Limoges, Helga Nowotny, Simon Schwartzman, Peter Scott, and Martin Trow, *The New Mode of Knowledge Production* (London: Sage, 1994). The similarity is noted in Wolfgang Jonas, “Exploring the Swampy Ground,” in *Mapping Design Research*, ed. Simon Grand and Wolfgang Jonas (Basel: Birkhäuser, 2012), 11–41.

4 For a detailed discussion of this, see Jonas, “Exploring the Swampy Ground.”

5 See Matthews and Brereton, “Navigating the Methodological Mire.”

- 6 Donald Schön, *The Reflective Practitioner* (New York: Basic Books, 1983).
- 7 Klaus Krippendorff, *The Semantic Turn: A New Foundation for Design* (Boca Raton, FL: CRC Press, 2006).
- 8 See Tony Fry, *Design as Politics* (London: Bloomsbury, 2010).
- 9 See Cristiano Storni, "Notes on ANT for Designers: Ontological, Methodological and Epistemological Turn in Collaborative Design," *CoDesign* 11, nos. 3–4 (2015): 166–78; Erling Bjögvinsson, Pelle Ehn, and Per-Anders Hillgren, "Design Things and Design Thinking: Contemporary Participatory Design Challenges," *Design Issues* 28, no. 3 (Summer 2012): 101–16.
- 10 See Paul Dourish, *Where the Action Is* (Cambridge, MA: MIT Press, 2001).
- 11 See Betti Marenko and Jamie Brassett (eds.), *Deleuze and Design* (Edinburgh: University of Edinburgh Press, 2015).
- 12 Gavin Melles, "An Enlarged Pragmatist Inquiry Paradigm for Methodological Pluralism in Academic Design Research," *Artifact* 2, no. 1 (2008): 3–11.
- 13 See Norbert Roozenburg, "On the Pattern of Reasoning in Innovative Design," *Design Studies* 14, no. 1 (1993): 4–18.
- 14 See Richard Buchanan, "Worlds in the Making: Design, Management, and the Reform of Organizational Culture," *She Ji: The Journal of Design, Economics, and Innovation* 1, no. 1 (2015): 5–21.
- 15 Rorty's *Philosophy and the Mirror of Nature* builds an argument in favor of reconceptualizing philosophy from the combined insights of these three men. See Richard Rorty, *Philosophy and the Mirror of Nature* (Princeton, NJ: Princeton University Press, 1979).
- 16 Or, for that matter, don't share. Two key divides emerge in relation to Dewey's clear respect for scientific process and method compared with Heidegger's and Wittgenstein's marked skepticism on the subject, as well as Dewey's advocacy in favor of democracy and social life compared with Heidegger's 1930s rejection of democracy. For more on the latter, see Rüdiger Safranski, *Martin Heidegger: Between Good and Evil*, trans. Ewald Osers (Cambridge, MA: Harvard University Press, 1999).

continue to hold relevance today. For these and other reasons, their work has been widely referenced in the design research literature, guiding arguments as to what design is, how it might be redirected, and what it means to involve practice in the context of research. Their prevalence is striking—Dewey's work sits behind Donald Schön's theory of reflective practice,<sup>6</sup> Wittgenstein's work supports Klaus Krippendorff's semantic theory of design,<sup>7</sup> and aspects of Heidegger's work inform Tony Fry's consideration of sustainability in design.<sup>8</sup>

Of course, it must be pointed out that these are not the only philosophers to whom design researchers and theorists have turned. If we explore the literature widely enough, many other powerful names emerge: Latour,<sup>9</sup> Merleau-Ponty,<sup>10</sup> Deleuze,<sup>11</sup> Rorty,<sup>12</sup> Peirce,<sup>13</sup> and McKeon,<sup>14</sup> to cite a few. An ambitious philosophical survey might try to enfold as many of these perspectives as possible. At this point, I believe it wise to limit ourselves to a few central voices. By focusing on Dewey, Wittgenstein, and Heidegger, the task is rendered more manageable. The fact is that despite some intriguing intersections, little has been done to bring these important figures together in design research (and arguably in philosophy).<sup>15</sup> If we are to enhance philosophical understanding in the field and develop an appropriate justificatory narrative for design research involving practice that moves beyond individual philosophies, I suggest that we are best to start here. The aim is to loosely weave together the voices with which the field most readily aligns. If appropriate, a more extensive base of connections may develop in time.

The article is divided into three sections. In the first, I work to sketch an outline of Dewey, Wittgenstein, and Heidegger as individual philosophers. In the second section, I present what I believe to be some of the most pertinent points of intersection between their (mostly final) philosophical positions. In the third section, I conclude by discussing the implications of these intersections for design research, setting out an initial scoping for an integrated justificatory narrative for design research involving practice.

Before proceeding, I offer two initial disclaimers. This article will not and cannot provide an exhaustive analysis of what Dewey, Wittgenstein, and Heidegger share.<sup>16</sup> It is best seen as an early attempt to draw out some links which can be identified in relation to their treatment of particular themes relevant to design research. Equally, it is also important to note that I will be not seeking to provide a holistic account of any one of these individual's particular bodies of work. Others have already done so. In place of such accounts, I offer an overview of their general domains of interest and long-term careers.

## Dewey, Wittgenstein, and Heidegger

Though more or less contemporaries, John Dewey (1859–1952), Ludwig Wittgenstein (1889–1951), and Martin Heidegger (1889–1976) do not, at first glance, form a natural grouping. To begin with, they were born and lived in different countries and cultures. Dewey was from the United States. Wittgenstein was from Austria (during his early years, the Austro-Hungarian empire) but spent much of his later life in England, as well as extended periods in Norway and Ireland. Heidegger spent his whole life in Germany.<sup>17</sup> They were also (for the most part) linked to separate philosophical traditions. Dewey’s work is associated with pragmatism, Wittgenstein’s with analytic philosophy, and Heidegger’s with phenomenology. Although it is beyond the scope of this article to cover the distinctions between these traditions,<sup>18</sup> it is fair to say that each implies a separate and (in some aspects) incompatible theoretical orientation and value system—some of which will be revealed here. Finally, alongside these points, it should also be noted that all three appear to have been largely unaware of each other’s work and, in some cases, each other’s existence.<sup>19</sup>

Given the sheer length of each philosopher’s careers—Dewey wrote for seventy years, Wittgenstein for forty, and Heidegger for nearly seventy—it is almost impossible to characterize the full sweep of their work in simple terms. This is confounded by the fact that each underwent either a subtle or profound shift in direction, which means that their philosophy is often understood to form two parts. Nonetheless, it is possible to offer a sketch of how they began their philosophic journey, where they ended up, and their greatest contributions.

Dewey began his career as teacher, but soon abandoned this course to pursue a doctorate, which in turn led to a series of academic appointments, including major positions at the University of Chicago and later Columbia University in New York. His early contributions spanned pedagogy and psychology as well as philosophy; following his move to Columbia in 1904, he concentrated only on the latter.<sup>20</sup> According to his account, Dewey’s thought underwent an intellectual revolution that saw him shift from an absolutist view of reality (linked to German philosopher Hegel) to what he called an experimentalist approach inspired partly by the work of William James.<sup>21</sup> He was most concerned with the relationship between human action and knowledge (or knowing), and drew out consequences for the areas of education, ethics, democracy, sociology, valuation, and even art.<sup>22</sup> Arguably, *Logic: A Theory of Inquiry and Experience and Nature* are the two key texts which define his later work.<sup>23</sup> The first offers a novel, empirical account of logical theory, wherein Dewey argues that formal logic must be seen and

- 17 Equally, though all three lived through periods of great political and social upheaval, each responded very differently, Dewey and Heidegger especially. Observing the rising threat of fascism and communism, the former became one of democracy’s greatest advocates. The latter interpreted the failure of the Weimar Republic as a sign that Germany’s democratic experiment had failed and subsequently joined National Socialist Party following Hitler’s ascension to power in 1933.
- 18 Broadly defined, pragmatism centers on the development of a practical theory of truth and knowledge; analytic philosophy the analysis of concepts through an analysis of language; and phenomenology the study of the structure of consciousness through the study of lived experience.
- 19 For an overview of some of the connections between Wittgenstein and Heidegger, see Paul M. Livingston, “Wittgenstein Reads Heidegger, Heidegger Reads Wittgenstein: Thinking Language Bounding World,” in *Beyond the Analytic-Continental Divide: Pluralist Philosophy in the Twenty-First Century*, eds. Jeffery A. Bell, Andrew Cutrofello, and Paul M. Livingston (Abingdon: Routledge, 2016), 222–48. For an outline of Heidegger’s interaction with pragmatism and Dewey in particular, see Hans-Joachim Dahms, “Pragmatism in the Third Reich. Heidegger and the Baumgarten Case,” *European Journal of Pragmatism and American Philosophy* 11, no. 1 (2019): 1–25. Dewey does not appear to have had any knowledge of Wittgenstein (though he was personally acquainted with his mentor, Bertrand Russell). Charles Guignon notes how Sydney Hook introduced Dewey to a translation of *Being and Time* and Dewey could recognize himself in it. Charles B. Guignon, *Heidegger and the Problem of Knowledge* (Indianapolis, IN: Hackett, 1983), 1.
- 20 For a rich and insightful overview of Dewey’s life and career, see Jay Martin, *The Education of John Dewey: A Biography* (New York: Columbia University Press, 2002).
- 21 See John Dewey, “From Absolutism to Experimentalism,” in *John Dewey, The Later Works, 1925–1953, vol. 5*

understood as an outgrowth of the conduct of successful inquiry (as exemplified by science in the modern era). Advances in logic and inquiry are said to occur in tandem, with the perfecting of the latter leading to a perfecting of the former and knowledge edging forward as a result. Connecting to this, the second text, *Experience and Nature*, sets out a naturalistic metaphysics, that is, a metaphysics grounded in our understanding of the empirical world, wherein language is seen to provide a link between direct experience and the broader field of existence.

Wittgenstein came to philosophy almost by chance, having originally elected to study engineering. Reading Bertrand Russell's *The Principles of Mathematics* during his time as a student led to an abiding interest in logic that would guide his work over the subsequent decades.<sup>24</sup> Alongside logic, he also investigated mathematics, psychology, and language. His work may be divided into two distinct phases. In the first, defined by the key early publication *Tractatus Logico-Philosophicus*,<sup>25</sup> he focused on drawing out strictly defined logic-world relations. On this account, language was understood to represent world in direct, pictorial-like terms. The boundaries of language marked the desirable boundaries of representation. The second phase, as defined by his other famous, posthumously published text *Philosophical Investigations*,<sup>26</sup> saw him move sharply away from his earlier theory with a novel method of "doing" philosophy. The method centered on an idea he carried over from his earlier work—most seemingly interminable philosophical "problems" were actually the result of nothing more than an inappropriate use of language in formulating concepts and questions. The philosopher's task was to dissolve such problems by working backward to demonstrate the original linguistic errors. With his new method of doing philosophy, it was proposed that wrong-footedness could only be avoided by attending to context, that is, to the situations in which language is used and meaning interpreted. Here the philosopher was to aim for a description of *what is* by highlighting the connections that can be identified between things—not for any explanatory theory of this or that phenomenon. Such an approach, Wittgenstein believed, encouraged a different type of understanding, allowing for a more immediate, intuitive apprehension of the subject at hand.<sup>27</sup>

Like Wittgenstein and Dewey, Heidegger came to philosophy indirectly, having first undertaken theological study. Through readings of leading European intellectuals, including Franz Brentano and Edmund Husserl, he gradually established a unique philosophical position linked to phenomenology—a then-emergent philosophic method that sought to analyze and define the structures of consciousness. His key contribution here,

1929–1930, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1984), 147–60.

- 22 Although there is an extensive secondary literature on Dewey's work, one of the most accessible overviews offered is Richard Gale's *John Dewey's Quest for Unity: The Journey of a Promethean Mystic* (New York: Prometheus Books, 2010).
- 23 John Dewey, *The Later Works, 1925–1953, vol. 12 1929–1930, Logic: The Theory of Inquiry*, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1987); John Dewey, *The Later Works, 1925–1953, vol. 1 1929–1930, Experience and Nature*, ed. Jo Ann Boydston (Carbondale: Southern Illinois University Press, 1984).
- 24 Bertrand Russell, *The Principles of Mathematics*, vol. 1 (Cambridge: Cambridge University Press, 1903).
- 25 Ludwig Wittgenstein, *Tractatus Logico-Philosophicus* (London: Kegan Paul, 1922).
- 26 Ludwig Wittgenstein, *Philosophical Investigations*, trans. Gertrude Elizabeth Margaret Anscombe (Oxford: Basil Blackwell, 1963 [1958]).
- 27 One of the most accessible and comprehensive overviews of Wittgenstein's life and philosophical development can be found in Ray Monk, *Ludwig Wittgenstein: The Duty of Genius* (London: Vintage Books, 1990).

- 28 Martin Heidegger, *Being and Time*, trans. Joan Stambaugh (Albany: State University of New York Press, 2010 [1927]).
- 29 *Being and Time* was not followed by a further substantive text. Rather, from the 1930s onward he set out his perspective in multiple lectures and seminars and published them as collections. For a substantive overview of Heidegger's life and philosophical development, see Safranski, *Martin Heidegger*.
- 30 Martin Heidegger, *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper Collins, 2001), 35.
- 31 Martin Heidegger, "Letter on 'Humanism,'" trans. Frank A. Capuzzi, in *Pathmarks*, ed. William McNeill (Cambridge: Cambridge University Press, 1998), 239.
- 32 Heidegger, *Poetry, Language, Thought*, 207.
- 33 Alongside Schön, see Buchanan, "Wicked Problems in Design Thinking."
- 34 See Peter Wright and John McCarthy, *Technology as Experience* (Cambridge, MA: MIT Press, 2004).
- 35 See ATELIER (project), Thomas Binder, Giorgio De Michelis, Pelle Ehn, Giulio Jacucci, Per Linde, and Ina Wagner, *Design Things* (Cambridge MA: MIT Press, 2011).
- 36 Alongside Krippendorff's work, see Pelle Ehn, *Work-Orientated Design of Computer Artifacts* (Stockholm: Arbetslivcentrum, 1988).
- 37 See Johan Redström, *Making Design Theory* (Cambridge, MA: MIT Press, 2017).
- 38 See Dourish, *Where the Action Is*; Terry Winograd and Fernando F. Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Norwood, NJ: Intellect Books, 1986).
- 39 Alongside Tony Fry's work, see Cameron Tonkinwise, "Is Design Finished? Dematerialisation and Changing Things," *Design Philosophy Papers* 2, no. 3 (2004): 177–95.
- 40 See Richard Buchanan, "Thinking about Design: An Historical Perspective," in *Philosophy of Technology and Engineering Sciences*, vol. 9, ed. Antonie Meijers (Amsterdam: Elsevier, 2009), 409–53; Marc Steen, "Co-Design as a Process of Joint Inquiry and Imagination," *Design Issues* 29, no. 2

as presented in his principal work, *Being and Time*,<sup>28</sup> was to offer a special outline of being, through his concept of *Dasein*—meaning literally “being there.” In this work, he attempted to map out *Dasein*'s relation to the world by exploring themes such as care, sociality, death, and most especially temporality—for Heidegger, the meaning of being *was* time. Unlike Dewey and Wittgenstein, he did not undergo a fundamental shift in theoretical or conceptual orientation. Rather, in what is referred to as his “later” philosophy, he gradually moved outward from his earlier position, asking more specifically targeted questions of being linked to a series of complex subject areas, including technology, art, poetry, and language.<sup>29</sup> The results of this questioning were assembled as a body of profound statements on the parameters and processes of everyday life, into who we are and what we do as humans in the world. Technology is understood as *Enframing*, wherein all becomes calculable and manipulable; art is “the truth of beings setting itself to work”;<sup>30</sup> and language is famously defined as the “house of being,”<sup>31</sup> a special means of presenting the “world and things.”<sup>32</sup>

As was noted already, the work of all three men has been widely referenced in design research literature. Deweyan philosophy informs at least three key areas of discourse relating specifically to discussions of the design process;<sup>33</sup> aesthetic experience in the design of interactive products and experiences;<sup>34</sup> and conceptual underpinnings of participatory design.<sup>35</sup> Wittgenstein's work has inspired a number of key texts aimed at reframing our approach to conceptualizing the design process,<sup>36</sup> as well as the form and function of design theory.<sup>37</sup> While Heidegger's work has had a major impact in the theorization of human–computer interaction<sup>38</sup> and, as was noted, underscored some important perspectives relating to sustainability in design.<sup>39</sup>

Referring to the earlier discussion concerning the possibility of developing a justificatory narrative for design research involving practice, I believe that Dewey has had the greatest impact of the three philosophers. Specifically, his theory of inquiry (i.e., the view that logic is the outgrowth of successful inquiry) offers a useful outline of how research proceeds and how knowledge is generated and validated in direct, empirical terms. Through the theory we are offered a sense of the dynamic relationships between questions, problems, problem solutions, meanings, and conclusions. As a number of contributors have demonstrated, it is possible to draw parallels between these core vectors and the fundamentally contingent, negotiated nature of design practice.<sup>40</sup>

Looking beyond Dewey's impact to that of Wittgenstein and Heidegger, I venture that although their work holds promise and has already been appropriated by theorists, we do not yet have a clear sense of what they offer in broad terms. In seeking to

respond to this, I cannot, as I have already stated, hope to provide a holistic account of their individual philosophies. Nevertheless, it is still possible to trace a number of ways they relate and may be related to one another. In what follows, I move to offer an initial outline of some of their key areas of intersections, with one eye trained on those issues that hold definite relevance for design research involving practice.

### Some Areas of Intersection

As might be assumed from the overviews, it is difficult to identify precise points at which of these three philosophers come together.<sup>41</sup> However, with a highly generalized view, one may note three key areas of intersection. These manifest as a shared concern for how humans apprehend and come to know the world; within this, a general focus on the notions of context (i.e., specific, located situations) and practice (i.e., what people do and what it means) and a clear rejection of foundationalism (i.e., the view that there can be a certain basis on which human knowledge can be “founded” or seen to “rest”).

In attempting to give some form to the above, it will be necessary to center our discussion around the following coupled themes: experience-being, language-meaning, and knowing-truth. To a certain degree these themes have already surfaced in the prior discussion. Because we do not yet have full capture on their handling by the trio, it will be useful to explore individual perspectives further, beginning with experience-being.

Experience and being are core touchstones in Dewey’s and Heidegger’s philosophies, respectively. (Wittgenstein, as we will see later, forms a special case.) Dewey’s most definite statement on experience is presented in *Experience and Nature*. Experience here is envisaged in exceptionally broad terms, including what is “experienced” (i.e., situations) and what is done (i.e., an individual’s actions). Existence is the background against which this all takes place—the world, in all its variety and multitude, as it is. Importantly, Dewey does not characterize experience in subjective terms. For him, our encounters with the world are not simply personal and private happenings but an interaction with the existentially real values of situations.<sup>42</sup>

Heidegger does not refer to experience in explicit terms. Instead, as we have seen, he foregrounds his central and most important concept, being. In broad outline, being can be seen to function in relatable terms to Dewey’s experience. It is the means by which we, as beings—in our *Dasein*—encounter or disclose the truths of the world. Such encounters and disclosures are said to be guided by care. For Heidegger, care defines being. It frames and directs our action, drawing us into relationship with other beings

---

(Spring 2013): 16–28; Peter Dalsgaard, “Designing Engaging Interactive Environments: A Pragmatist Perspective,” PhD diss., Aarhus University, 2009.

41 Guignon notes that given Dewey’s and Heidegger’s shared reference point in Hegel, this is not so surprising. See Guignon, *Heidegger and the Problem of Knowledge*, 1.

42 For a clear insight into the dynamics of this theoretical proposal, see Ralph Sleeper, *The Necessity of Pragmatism, John Dewey’s Conception of Philosophy* (New Haven, CT: Yale University Press, 1986); for an understanding of how this may have relevance for design research, see Brian Dixon, “Experiments in Experience: Towards an Alignment of Research through Design and John Dewey’s Pragmatism,” *Design Issues* 35, no. 2 (Spring 2019): 5–16.

and things.<sup>43</sup> Alongside this care-centered understanding, in later philosophy he set out a second, broader version of being, what Julian Young refers to as Being with a capital B. This version of Being is all-encompassing, taking in not just being for a being but all that “is,” the world of beings.<sup>44</sup> The interaction between these two levels of being—being and Being—becomes the center point from which wider questions of human existence may be considered (e.g., technology).

Unlike Heidegger and Dewey, Wittgenstein does not foreground the concept of experience or being as such. At the same time, he does not overlook or completely ignore these aspects. In his later philosophy, notions of experience are enfolded into his broader considerations of the areas of logic, language, and psychology. Thus, to properly gain a handle on his approach, we must turn to the coupled theme of language-meaning.

Language and meaning are especially important concerns for all three philosophers, and remarkably, there are some striking alignments between their positions. Following from the last section, I would argue that of the group, Wittgenstein has had the greatest impact. Though he was at heart a logician, he saw logic and language as entwined, related strands feeding into each other. Discussions of logic also ultimately functioned as discussions of language.

His mature approach to the subject of language is perhaps best demonstrated by his concept of “language games,” which make its first appearance in what are called *The Blue Book* and *The Brown Book* and is especially prominent in *Philosophical Investigations*.<sup>45</sup> These take the form of simple, imaginary scenarios, which follow from asking questions. They allow him to demonstrate how particular conceptions are flawed (i.e., dissolving philosophic problems), or alternatively, how language might actually “work” in everyday terms. In this way, we come to see how meaning is ultimately context-dependent, emerging not just through words we use but also the action we perform and the broader set of relationships these sustain.<sup>46</sup> More generally, language games allow us to draw out a better understanding of logic and, ultimately, the nature of human existence.

The concept of rules and rule-following point to another aspect of Wittgenstein’s work on language-meaning worth highlighting, especially in connection with experience. He takes up the idea that contained in particular language games are things we are expected to do and say, ways we are expected to respond.<sup>47</sup> We are said to gradually master these expectations and actions by participating, being part of society and culture, and engaging in what Wittgenstein refers to as a “form of life.”<sup>48</sup>

43 Heidegger writes that because “being-in-the-world is essentially care, being-together-with things at hand could be taken in our previous analyses as *taking care* of them.” See Heidegger, *Being and Time*, 186 [193].

44 Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper & Row, 1977), 44.

45 Ludwig Wittgenstein, *Preliminary Studies for the “Philosophical Investigations”*: *The Blue and Brown Books* (Oxford: Basil Blackwell 1958).

46 Wittgenstein, *Philosophical Investigations*, 216e.

47 *Ibid.*, 38e [80–81].

48 *Ibid.*, 11e [22].

Dewey also invested considerable efforts in working to get to the bottom of language and meaning as they emerge and take form in the world. On his account, language was to be understood as the “tools of tools”<sup>49</sup>—on one hand instrumental, allowing us to work together cooperatively; on the other hand, consummatory,<sup>50</sup> allowing for sharing and celebration. Like Wittgenstein, Dewey saw meaning as emerging in context. As people undertake action together, persons, things, and consequences gradually came into association through the language. The persons, things, and consequences become meaningfully connected as a series of related things that go together. Over time, as special emphasis is placed on particular associations and connections, these come to be seen as pronounced cases of meaning and gradually stand for “the essence” of the thing—what it means in definite existential terms.<sup>51</sup>

Heidegger referred to language as the house of being, presenting it almost as a store in which collective, societal understanding is contained. Picking up on this metaphor, Lawrence Hatab and William Brenner claim that Heidegger is not “saying that language signifies man’s world (is a description of the house); language *is* his world (the house itself).”<sup>52</sup> Alongside this overarching positioning, Heidegger can also be found to invest considerable effort in work to detail how language, through the acts of speaking and listening, brings the world and things together for speaker and listener.<sup>53</sup>

I take the final coupled theme of knowing-truth next. The three philosophers take highly individual approaches here. As might be expected, they reject traditionally held conceptions, and their treatments may be related to their positions on experience-being and language-meaning.

Dewey famously links knowing with the act of inquiry and this, as we have seen, to logic. Deweyan inquiry begins when the would-be inquirer alights on a doubtful or troublesome situation. The aim is to transform this doubtfulness by asking questions, seeking answers/solutions, interpreting meanings, and ultimately bringing a sense of wholeness to what was incoherent. Knowledge is the end of inquiry, its outcome.<sup>54</sup> Dewey avoids direct reference the concept of truth. Instead, he offers an alternative approach to validation in his concept of warranted assertability. Following this approach, the strength of our claims to knowledge are seen to rest on the soundness of our evidence. Our conclusions are never final; they can always be reopened and reshaped by future inquiry.<sup>55</sup>

Wittgenstein does not address knowing-truth as directly as Dewey does. His most profound statement on these subjects can be found in the *On Certainty*,<sup>56</sup> another posthumous publication

49 Dewey, *The Later Works*, vol. 1, 146.

50 *Ibid.*, 144.

51 *Ibid.*, 136.

52 Lawrence J. Hatab and William Brenner, “Heidegger and Wittgenstein on Language and Mystery,” *International Studies in Philosophy* 15, no. 3 (1983): 25–43.

53 See Heidegger, *Poetry, Language, Thought*, 185–208. Beyond the overarching position outlined above, Dewey can also be found to discuss language in similar terms. See Dewey, *The Later Works*, vol. 1, 147.

54 See Dewey, *The Later Works*, vol. 12, 105–22.

55 *Ibid.*, 108.

56 Ludwig Wittgenstein, *On Certainty*, eds. Gertrude Elizabeth Margaret Anscombe and George Henrik Von Wright, trans. Denis Paul and Gertrude Elizabeth Margaret Anscombe (Oxford: Wiley-Blackwell 1991 [1969]). Like *Philosophical Investigations*, the text functions similarly to an open-ended discussion—questions are asked and responses offered, but no absolute conclusion is reached.

containing some of his final writings. The picture of knowing and truth offered here centers on contingency and association. Wittgenstein proposes that we are taught how to judge and thus learn of the connections between judgments. As a consequence, the things we believe are not to be seen as single propositions held in isolation but as representative of a system of propositions.<sup>57</sup> The truth of statements then belongs to our “frame of reference,” the language games and forms of life in which we participate.<sup>58</sup> The whole is supported by the idea that at a certain point doubt becomes meaningless; that is, it no longer makes sense to question whether this is or that really is the case.<sup>59</sup>

Again, Heidegger does not approach the subject of knowing in direct terms. Indeed, in many ways his philosophy can be seen as a rejection of traditional philosophical concern with knowledge and knowing, as well as formal logic. Insofar as knowing is addressed, we may find it implicitly mapped to the care of *Dasein*. Care opens up the possibility of discovery. Following from this position, as with Dewey, Heidegger rejects any understandings of truth that center on the idea of “correspondence of one being (subject) to another (object).” Rather, truth is presented as unconcealment where beings are revealed in “the how of their discoveredness.”<sup>60</sup> Our questioning not only reveals something of the world but also something of ourselves, and we and the world are transformed through the insights gained.<sup>61</sup>

At this point, it will be useful to briefly return to the areas of intersection highlighted above (i.e., the concern for how we apprehend the world, a focus on practice and context, and an antifoundationalist stance). Reflecting on these in relation to the themes just explored, it can be said in broad terms that for all three philosophers, our apprehension of the world occurs through being present to the social, cultural, and environmental/ecological practices and processes we participate in and encounter. Reality is not separate to this apprehension, it is this formed of it—holistic experience for Dewey, language games for Wittgenstein, *Dasein* for Heidegger. A belief in foundations is simply not compatible with such an account. For Dewey, accepting foundations would overlook the emergent character of the experience-inquiry-logic continuum. For Wittgenstein, it would mean overlooking the unpredictability and uncontrollability of our language games and their resultant forms of life. For Heidegger, it would amount to a negation of the being of our being. Thus, according to all three, we can never “know,” that is, have knowledge, in definite terms. Rather, we must work to make and remake our knowledge, over and over again, through contextualized practices as the practices and contexts themselves shift and change. In the final section, I explore how such an outline may be related to design research involving practice.

57 Wittgenstein, *On Certainty*, 21e [140–41].

58 *Ibid.*, 12e [82–83].

59 *Ibid.*, 44e [341–43].

60 Heidegger, *Being and Time*, 210 [219].

61 See Martin Heidegger, *The Essence of Truth: On Plato's Cave Allegory and Theaetetus* (London: Continuum, 2002).

### Toward a Justificatory Narrative

Design research involving practice is always inevitably situated. The practical aspect dictates as much. Like Dewey's would-be inquirer, Wittgenstein's language games participant, and Heidegger's care-bound being, the designer-researcher must work to understand their context and make decisions in response to its various currents. Their key resources here are attention, awareness, imagination, and, of course, action. They may be aiming to develop particular material outcomes or bring about particular immaterial changes—social, cultural, economic, or other. There is no guarantee of success here. The results cannot be known in advance, only anticipated, hoped for, and worked toward. Because of the situated, practical nature of the approach, it is especially difficult to arrive at any generalizable conclusions. What works somewhere for someone at a particular time may not work somewhere different for someone else at another time. Nonetheless, if carefully pursued, the benefits of such research can be profound. Situations may be transformed for the better, new meanings and new realities may be brought about. This justifies the approach in immediate terms, with the idea of direct, real-world impact rendering its value readily apparent.

Yet the opening question of how one addresses the issue of developing a philosophical justificatory narrative for such an approach requires more than a demonstration of direct, real-world effect.

To claim to have produced knowledge (in traditional terms at least) requires neutral data collection and analysis. One must have a contribution to offer a particular community of discourse, that is, insights that hold clear value, extending understanding and furthering capabilities. This is problematic for design research involving practice. How can one claim to have produced knowledge when the research approach literally endeavors to transform the context in which data are being collected and analyzed and results in ungeneralizable conclusions? Where is the contribution beyond the situated, contextual material and immaterial outcomes?

This is where the philosophies of Dewey, Wittgenstein, and Heidegger come in to their own. As we saw in the last section, they offer particular ways of seeing that move us beyond former conceptions of knowledge as representational and static, as something that sits apart from the world and our involvement in it. In line with the underlying orientation of design research involving practice, they position people as creative actors inseparable from their situations. They cannot imagine not acting, not being situated. From their point of view, in terms of knowledge, there is no certainty or generality. For Dewey, knowledge is a temporal process. It marks the end of one inquiry while pointing to the

beginning of others. For Wittgenstein, the emergence of a new language game leads to new forms of life, alternating our frame of reference and reframing our knowledge. For Heidegger, *Dasein's* care will always lead us elsewhere to new horizons of being.

These perspectives disavow neutrality. They insist on commitment and, to use Heidegger's word, care. Any contribution to discourse may be related to the situated material and immaterial outcomes of the work, but it is also found in the act and fact of our inquiring, participating, and indeed being there and being present to the research process. The point is to keep going, to keep producing. Here, if only briefly, these three voices can be brought together. Here, if only briefly, we can glimpse a justificatory narrative for design research involving practice.