

PREPARING EDUCATIONAL RESEARCHERS:
THE ROLE OF SELF-DOUBT

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ABSTRACT. Educational scholars concur that research preparation courses should engage doctoral students with methodological differences and epistemological controversies. Mary Metz and Nancy Lesko recently published articles describing how courses guided by this aim engender self-doubt for students. Neither scholar is entirely convinced that self-doubt is educationally productive. Drawing on Hans-Georg Gadamer's notion of *Bildung*, Deborah Kerdeman reframes the view of self-doubt that Metz and Lesko assume and shows why self-doubt can be transformative. Gadamer's argument regarding self-doubt challenges constructivist views of agency and also demonstrates that engaging with difference is necessary for new understanding to emerge through conversation. Kerdeman concludes by considering why engaging in *Bildung* helps doctoral students become good educational researchers and why cultivating *Bildung* should therefore be an aim of research preparation courses that engage students with methodological differences and epistemological controversies.

[O]nly those teachers who can freely question their own prejudgments, and who have the capacity to imagine the possible, can help students develop the ability to judge and the confidence to think for themselves. That we criticize ourselves and that others criticize us is the authentic breath of life for every true academic and researcher. This is not always comfortable. I do not propose that to be criticized is comfortable. Every person is then a little distressed and doubts himself more than he usually does. This is true for teachers as well as for learners — and to have chosen this is our lot.

– Hans-Georg Gadamer¹

INTRODUCTION

In a *New York Times* article published in 2014, political scientist Michael Suk-Young Chwe recalls a lesson taught by David Goodstein, his college physics professor. Science is a lived human process, Goodstein told Chwe's class. Scientists thus are not dispassionate about their work but instead harbor biases that can affect their research. Therefore they must learn to doubt their data and findings. This entails doubting oneself and one's predilection to confirm what one already knows or wants to believe.

Professor Goodstein "was trying to give us a glimpse of self-understanding, a moment of self-doubt," Chwe reflects. "We freshmen physics students found this a bit hard to take." Over time, however, Chwe changed his mind about the value of Goodstein's lesson. "Scientists now worry that many published scientific results are simply not true," Chwe reports. "A major root of the crisis," he

1. Hans-Georg Gadamer, "The Idea of the University," in *Hans-Georg Gadamer on Education, Poetry, and History: Applied Hermeneutics*, ed. Dieter Misgeld and Graeme Nicholson (Albany: State University of New York Press, 1992), 58.

continues, is the unconscious tendency to “focus only on evidence that supports [one’s] preconceptions.” To check this tendency, Chwe concludes, scientists would do well to heed Goodstein’s counsel to achieve self-awareness through self-doubt.²

Postpositivists argue that knowledge in all disciplines advances when scholars submit their work for critical review and are open to doubting the validity of their evidence and conclusions.³ The premise that doubting one’s findings entails doubting *oneself* has not received much attention, however.⁴ Chwe notes that the German philosopher Hans-Georg Gadamer demonstrates why self-doubt is necessary to improve understanding of any subject. Chwe does not detail Gadamer’s ideas or discuss why Gadamer believes that openness to self-doubt should be taught. I want to analyze Gadamer’s argument about self-doubt and demonstrate its relevance for preparing doctoral students to become good educational researchers.

The significance of Gadamer’s philosophy for preparing educational researchers becomes apparent when we consider the current state of the field. Educational researchers subscribe to a host of different — and sometimes competing — disciplinary frameworks, methodologies, and epistemological positions. A number of scholars believe this situation is problematic. Michael Feuer, Lisa Towne, and Richard Shavelson fear that researchers’ differences prevent them from achieving consensus on how to define and assess scientific rigor. Failing to articulate common standards, educational researchers cede responsibility for evaluating studies to the federal government.⁵ Alan Schoenfeld worries that lack of agreement regarding what counts as rigorous research makes it difficult to determine what doctoral students in education should know and be able to do.

2. Michael Suk-Young Chwe, “Scientific Pride and Prejudice,” *Sunday Review, New York Times*, January 31, 2014, http://www.nytimes.com/2014/02/02/opinion/sunday/scientific-pride-and-prejudice.html?hp&rref=opinion_r=0.

3. See, for example, D. C. Phillips and Nicholas C. Burbules, *Postpositivism and Educational Research* (New York: Rowman and Littlefield, 2000).

4. An exception is Israel Scheffler’s work on cognitive surprise. See Israel Scheffler, “In Praise of the Cognitive Emotions,” *Teachers College Record* 79, no. 2 (1977): 171–186. For a critique of Scheffler’s notion of cognitive surprise, see Deborah Kerdeman, “Pulled Up Short: Challenges for Education,” in *Philosophy of Education 2003*, ed. Kal Alston (Urbana, IL: Philosophy of Education Society, 2004), 208–216.

5. Michael J. Feuer, Lisa Towne, and Richard J. Shavelson, “Scientific Culture and Educational Research,” *Educational Researcher* 31, no. 8 (2002): 9–10. Also see Pamela A. Moss, D. C. Phillips, Frederick D. Erickson, Robert E. Floden, Patti A. Lather, and Barbara L. Schneider, “Learning from Our Differences: A Dialogue across Perspectives on Quality in Education Research,” *Educational Researcher* 38, no. 7 (2009): 501–517.

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"There is no canon, there are no core methods," Schoenfeld laments.⁶ Aaron Pallas cautions that long-term engagement with methodological differences may be psychologically unhealthy. "A mild form of dissociative identity could result from sustained engagement with two or more divergent epistemologies," Pallas warns.⁷

By contrast, Gadamer holds that differences do not necessarily impede understanding or hamper reaching agreement. On the contrary, engaging with differences can strengthen communities and improve mutual understanding of issues. It also can help individuals become better people. Whether or not this happens, however, depends on the disposition of interlocutors to experience self-doubt in the wake of being challenged by different perspectives.

Over the past decade and a half, many education scholars have concluded that learning to engage with differences should be a primary aim of research preparation courses. In an influential article published in *Educational Researcher*, Lauren Jones Young articulated this pedagogical charge as follows: "Can prospective scholars be prepared to appreciate and learn from the presence of epistemological controversy and diverse perspectives? How might graduate programs in education develop researchers who have the capacity to appreciate and perhaps use multiple perspectives and methodologies?"⁸

A number of scholars have written about their experiences developing and teaching research preparation courses that respond to Young's questions.⁹ Mary Metz at the University of Wisconsin–Madison and Nancy Lesko at Teachers College, Columbia University, have published vivid accounts of their attempts to engage beginning doctoral students with methodological differences and epistemological controversies.¹⁰ Both Metz and Lesko report that over a period of several years, students in their courses consistently experienced self-doubt. Lesko and Metz tried to address their students' discomfort; they acknowledge that their

6. Alan H. Schoenfeld, "The Core, the Canon, and the Development of Research Skills: Issues in the Preparation of Educational Researchers," in *Issues in Education Research: Problems and Possibilities*, ed. Ellen Condliffe Lagemann and Lee S. Shulman (San Francisco: Jossey-Bass, 1999), 167.

7. Aaron M. Pallas, "Preparing Education Doctoral Students for Epistemological Diversity," *Educational Researcher* 30, no. 5 (2001): 11.

8. Lauren Jones Young, "Border-Crossings and Other Journeys: Re-envisioning the Doctoral Preparation of Educational Researchers," *Educational Researcher* 30, no. 5 (2001): 3.

9. See, for example, the articles in Anna Neumann, Aaron Pallas, and Penelope Peterson, eds., "Investment in the Future: Improving Education Research at Four Leading Schools of Education — Campus Experiences of the Spencer Foundation's Research Training Grant Program," special issue, *Teachers College Record* 110, no. 7 (2008): 1357–1503. Also see Reba N. Page, "Reshaping Graduation Preparation in Educational Research Methods: One School's Experience," *Educational Researcher* 30, no. 5 (2001): 19–25; and Pallas, "Preparing Education Doctoral Students for Epistemological Diversity."

10. Mary Metz, "Intellectual Border Crossing in Graduate Education: A Report from the Field," *Educational Researcher* 30, no. 5 (2001): 12–18; and Nancy Lesko, Jacqueline Simmons, Antoinette Quarshie, and Nicki Newton, "The Pedagogy of Monsters: Scary Disturbances in a Doctoral Research Preparation Course," *Teachers College Record* 110, no. 8 (1998): 1541–1573. These works will be cited in the text as *IBC* and *PM*, respectively, for all subsequent references.

efforts were not entirely successful. Nonetheless, they agree that their courses, while unsettling, were beneficial for students.¹¹

This article explores three questions: (1) Why does Gadamer argue that engaging with different perspectives and being open to self-doubt is necessary to improve understanding? (2) How can teachers help doctoral students learn to regard self-doubt as a transformative experience? (3) Why does learning to be open to self-doubt help doctoral students become good educational researchers?

To address these questions, I first will explain why Gadamer argues that self-doubt arises when we converse with people who challenge our preconceptions. I also will explain why he maintains that being open to self-doubt is necessary to transform understanding.

I then will turn to Metz and Lesko. Analyzing how Metz and Lesko understood and responded to their students' struggles, I will show that although they believe that engaging with differences provokes self-doubt, they are not entirely convinced that self-doubt promotes learning. I will show that their hesitation stems from their deep-seated assumption that differences impede productive conversation. This belief, I argue, is fueled by a particular view of human agency. Gadamer challenges this network of assumptions. In so doing he lays the groundwork for his argument regarding the necessity and value of self-doubt for learning.

In conclusion, I will consider how teachers could draw on Gadamer's ideas to help students learn to be open to self-doubt. To do this, I will rethink two pedagogical strategies Metz and Lesko employed to mitigate their students' resistance to engaging with difference. I also will articulate why being open to self-doubt is vital for preparing students to become good educational researchers and why cultivating this disposition should therefore be an aim of courses that engage doctoral students with epistemological controversies and methodological differences.

ENGAGING DIFFERENCE AND EXPERIENCING SELF-DOUBT: GADAMER'S PHILOSOPHY OF UNDERSTANDING

To appreciate Gadamer's ideas regarding self-doubt, it is helpful to briefly examine his philosophy of understanding. According to Gadamer, understanding is an existential phenomenon that characterizes how human beings experience the world. There never is a time when we stop understanding or stop trying to understand our situation. As Gadamer puts it: "Understanding is not a resigned ideal of human experience. ... Understanding is the original characteristic of the being of human life itself."¹²

11. Metz writes about a three-year period during which her course was offered. She suggests that initially, students enrolled during the first year of their doctoral program; subsequent cohorts were composed of second- and third-year students (*IBC*, 17). Lesko indicates that she taught her course for seven years. Enrollees included new matriculates as well as second- and third-year students. All students had not yet defended a dissertation proposal (*PM*, 1545).

12. Hans-Georg Gadamer, *Truth and Method*, 2nd rev. ed., trans. Joel Weinsheimer and Donald G. Marshall (New York: Continuum, 2004), 350. This work will be cited in the text as *TM* for all subsequent references.

Arising with our existence, understanding is not strictly a cognitive function or a method we employ to clarify the meaning of objects we confront (texts, events, intentions, and so on). Understanding instead is an experience we undergo by virtue of the fact that we live in a meaning-laden world. Thus, we do not regulate or control understanding as much as we like to think. Understanding instead is an event that happens to us. "My real concern," Gadamer writes, "is not what we do or what we ought to do, but what happens to us over and beyond our wanting and doing" (*TM*, xxv–xxvi).

Understanding that is intrinsic to human experience is prereflective. When we understand things prereflectively, we do not regard them as separate from our concerns. Rather we regard them as being intimately tied to our purposes and interests, and we see how they fit within the meaningful contexts in which we find them. Gadamer calls prereflective understanding "know-how." Know-how describes understanding that is situated and practical, not theoretical or technical.

In addition to knowing how things relate to our aims and needs, we also know how to get around the circumstances in which we find ourselves. Knowing how to get around our situation, we do not objectify it and analyze it from afar. Rather, we subconsciously ask ourselves certain questions. What are my circumstances asking of me? What is the right thing to do? Am I willing and able to respond? What we do and don't do reflects our past choices and expresses the kind of person we think we are and want to become. *How* we see the world and *what* we do within it is bound up with *who* we are and *where* we think we are headed. Practical know-how, in short, entails self-understanding. In Gadamer's words, "*all such understanding is ultimately self-understanding. ... Thus it is true in every case that a person who understands, understands himself (sich verstehen), projecting himself upon his possibilities*" (*TM*, 250).¹³

If prereflective know-how is inescapable, how can new understanding arise? Wouldn't "new" understanding simply repeat and perpetuate what we already understand? Gadamer argues that while understanding is situated, it is neither static nor self-enclosed. To the contrary, understanding is dynamic and porous. Gadamer likens understanding to a horizon that constantly shifts and evolves to disclose new perspectives.

Of course, because we always are engaged in understanding something, understandings that evolve over time are never entirely new. New understandings instead are partially circumscribed by assumptions we already hold. Nonetheless, understanding can and does change. Change does not signal that understanding accumulates or progresses in a linear fashion. Understanding changes, rather, because it "circles back" on itself and disrupts prior beliefs. New understanding is primarily negative, Gadamer insists. It interrupts familiar understanding of how to get around and exposes it as somehow problematic. We come to see that we

13. Gadamer calls self-understanding "application."

have been blind to meanings we now realize are obvious, and we understand our situation with greater clarity and awareness.¹⁴

Thus, prereflective understanding can become critical and reflective. In light of what we now see, however, we no longer know how to get around as we once did; our way of being and experiencing the world has shifted. This is disorienting, Gadamer acknowledges. While new understanding is illuminating, it also is painful, provoking anxiety and self-doubt.

Gadamer calls this enlightening but painful experience “being pulled up short” (*TM*, 270). Because being pulled up short negates what we think we know, we cannot predict how familiar understandings will change when they are disrupted. No less than prereflective know-how, reflective understanding happens “over and beyond our wanting and doing.” Only by actually *being* pulled up short can we come out the other side of this experience — sadder, perhaps, but wiser and with deeper insight into the meaning of our existence and the purpose of our life.

Gadamer uses the word *Bildung* to describe transformations of understanding and self-understanding that occur when we are pulled up short.¹⁵ Being open to perspectives that challenge our presuppositions is key for *Bildung*, Gadamer writes. In his words, “That is what, following Hegel, we emphasized as the general characteristic of *Bildung*: keeping oneself open to what is other — to other, more universal points of view” (*TM*, 15).

Gadamer believes that opportunities for *Bildung* naturally arise in life. Even in early childhood, we encounter people who negate our assumptions and disappoint our expectations. “We must learn to accept others and otherness,” Gadamer writes. “This implies that we must learn that we could be wrong. We must learn how to lose the game — that begins with the age of two or may even earlier. He who has not learned this early, will not be able to completely handle the greater tasks of adult life.”¹⁶

Learning how to lose the game at age two will not absolve us from being pulled up short as adults, however. Because we assume more responsibilities and commitments as we age, being open to viewpoints that challenge our way of life becomes harder. We therefore must constantly work on cultivating dispositions that support openness to being pulled up short, including modesty, humility, the courage to be vulnerable, a willingness to take risks, and the maturity to acknowledge our limitations. These dispositions are not competencies or skills we can practice until we no longer need to think about them. Neither is *Bildung* an

14. See Gadamer's discussion of *Erfahrung* (*TM*, 341–355).

15. For Gadamer's discussion of *Bildung*, see *TM*, 11–17. Also see Hans-Georg Gadamer, “Education Is Self-Education,” *Journal of Philosophy of Education* 35, no. 4 (2001): 529–538. For a discussion of *Bildung* in contemporary educational philosophy, see the articles in Lars Løvlie and Paul Standish, eds., “*Bildung* and the Idea of a Liberal Education,” special issue, *Journal of Philosophy of Education* 36, no. 3 (2002): 317–512.

16. Gadamer, *Hans-Georg Gadamer on Education, Poetry, and History*, 233.

outcome we can measure or test. *Bildung* instead is a way of being that continually strives to learn from experiences we neither desire nor plan.

Because self-transformation through self-doubt is hard, Gadamer thinks the dispositions that support *Bildung* should be cultivated through education. This is the aim of humanities education, Gadamer writes.¹⁷ Exposing students to people and texts that pull them up short, the humanities seek to transform students' understanding by providing them opportunities to test their assumptions and experience self-doubt. Mark Slouka illustrates Gadamer's idea. The humanities, Slouka argues, expand the reach of our understanding and compassion because they

complicate our vision, pull our most cherished notions out by the roots, flay our pieties ... grow uncertainty ... out of all this work of self-building might emerge an individual capable of humility in the face of complexity; an individual formed through questioning and therefore unlikely to cede that right; an individual resistant to coercion, to manipulation and demagoguery in all their forms.¹⁸

While *Bildung* is the central focus of humanities education, *Bildung* is not restricted to the humanities, Gadamer argues. Any educational endeavor can be approached as an opportunity not only to sharpen students' minds, but as a chance to support their development as persons.

Gadamer believes that *Bildung* is promoted through conversation. Thus, conversations that engage different perspectives are central to the kind of education Gadamer envisions.¹⁹ Not every conversation promotes *Bildung*, however. Sometimes we defend our position by trying to deflate the other's questions. Sometimes we try to anticipate what the other will say. In so doing, we are not genuinely open to hearing the other but instead are protecting our beliefs from challenges that others may pose. Empathy is another way to protect our position, according to Gadamer. Believing we can relate to another's perspective, *we* act on the other person instead of allowing the other person to act on *us*. When defensiveness, anticipation, and/or empathy prevail, "talk" becomes something other than genuine conversation: an interrogation, perhaps, or a debate or a therapy session.²⁰

In genuine conversations, by contrast, interlocutors recognize that they share a common concern. "Every conversation," Gadamer writes, "presupposes a common language, or better, creates a common language. Something is placed at the center,

17. For a nice discussion of Gadamer and the humanities, see Jean Grondin, *Sources of Hermeneutics* (Albany: State University of New York Press, 1995), 125–139.

18. Mark Slouka, "Dehumanized: When Math and Science Rule the School," *Harper's Magazine* (September 2009): 37. Also see David Denby, *Great Books: My Adventures with Homer, Rousseau, Woolf, and Other Indestructible Writers of the Western World* (New York: Touchstone, 1996); and Robert V. Bullough Jr., "Developing Interdisciplinary Researchers: What Ever Happened to the Humanities?," *Educational Researcher* 35, no. 8 (2006): 3–10.

19. See Paul Fairfield, ed., *Education, Dialogue, and Hermeneutics* (New York: Continuum, 2011).

20. For Gadamer's discussion of this point, see *TM*, 352–355.

as the Greeks say, which the partners in dialogue both share, and concerning which they can exchange ideas with one another" (*TM*, 371).

But while interlocutors may share a common concern, their views of an issue invariably differ. Neither party can leave his own understanding behind. For dialogue to proceed, therefore, each party must regard his perspective as tentative and subject to change. Gadamer explains, "The interpreter's own horizon is decisive, yet not as a personal standpoint he maintains or enforces but more as a possibility that one brings into play and puts at risk" (*TM*, 390). Viewing our own perspective as merely a possible opinion, we can allow that our partner's perspective expresses a possible truth that matters for *our* understanding. We are *affected* and "claimed" by what our partner says and *experience* how his view of the topic challenges our own. "Openness to the other," Gadamer points out, "involves recognizing that I myself must accept some things that are against me, even though no one forces me to do so" (*TM*, 355; see also 350–355 and 320).

Allowing ourselves to be challenged by our partner, then, clarifies and possibly corrects our own understanding of issues in ways we do not direct and may not want. The process of challenging beliefs is reciprocal, according to Gadamer. Each party offers and accepts a perspective that neither party could fathom on its own. When parties risk their assumptions to one another, they can realize a new common perspective on the issue:

Both come under the influence of the truth of the object and are thus bound to one another in a new community. To reach an understanding in a dialogue is not merely a matter of putting oneself forward and successfully asserting one's own point of view, but being transformed into a communion in which we do not remain what we were. (*TM*, 371)

Gadamer calls the new understanding that emerges during genuine conversations a "fusion of horizons" (see *TM*, 305, 337, 367, 390, and 398). For horizons to fuse, parties do not first construct or clarify their own understanding of an issue and then adjust their respective positions so that they are integrated or match. Rather, horizons fuse when parties get caught up in conversation together and allow the dialogue to take its own course. Neither party plans or directs how new understanding arises or anticipates what will emerge as a consequence of talking together. It is the experience of conversation itself that transforms understanding for both partners.²¹ Each fusion is subject to being negated as partners continue questioning one another's beliefs and realize new unforeseen perspectives on issues of mutual concern.

21. Elsewhere Gadamer says, "In the last analysis, *all* understanding is self-understanding, but not in the sense of a preliminary self-possession or of one finally and definitively achieved. For the self-understanding only realizes itself in the understanding of a subject matter and does not have the character of a free self-realization. The self that we are does not possess itself; one could say that it 'happens.'" Hans-Georg Gadamer, *Philosophical Hermeneutics*, ed. and trans. David E. Linge (Berkeley: University of California Press, 1976), 55. Brice Wachterhauser explains Gadamer's idea as follows: "The insights into a certain phenomenon which emerge in the course of the dialogue are inseparable from the dialogical situation and the conditions that make it possible." Brice R. Wachterhauser, *Hermeneutics and Modern Philosophy* (Albany: State University of New York Press, 1986), 35.

Because we cannot foresee or direct how horizons will fuse to disclose new understanding, Gadamer observes that we do not conduct genuine conversations. Genuine conversations, rather, conduct us:

We say that we "conduct" a conversation, but the more genuine a conversation is, the less its conduct lies with the will of either partner. Thus a genuine conversation is never the one that we wanted to conduct. Rather, it is generally more correct to say that we fall into conversation, or even that we become involved in it. The way one word follows another, with the conversation taking its own twists and reaching its own conclusion, may well be conducted in some way, but the partners conversing are far less the leaders of it than the led. No one knows in advance what will "come out" of a conversation. Understanding or its failure is like an event that happens to us. ... All this shows that a conversation has a spirit of its own, and that the language in which it is conducted bears its own truth within it — i.e., that it allows something to "emerge" which henceforth exists. (*TM*, 385)²²

In genuine conversations, parties are not only open to being challenged by one another; they also are open to the conversation itself, trusting that the dialogue has a spirit of its own that can transform understanding "over and beyond [their] wanting and doing."

In sum, genuine conversations require parties to be open to experiencing how another's perspective challenges and possibly negates one's own understanding of an issue. Differences do not impede understanding. On the contrary, embracing differences is necessary for parties to understand issues in ways they cannot fathom alone or anticipate prior to conversing together. Being open to different perspectives not only makes it possible for horizons to fuse and new understanding to emerge; it also strengthens relationships and can forge new bonds. Jane Roland Martin captures the spirit of a Gadamerian conversation. "A good conversation," Martin writes, "is neither a fight nor a contest. Circular in form, cooperative in manner, and constructive in intent, it is an interchange of ideas by those who see themselves not as adversaries but as human beings come together to talk and listen and learn from one another."²³

STRUGGLING WITH SELF-DOUBT IN DOCTORAL EDUCATION: METZ AND LESKO

To appreciate the relevance of Gadamer's ideas for preparing educational researchers, it is helpful to examine how Mary Metz and Nancy Lesko describe their experiences teaching doctoral students to engage with methodological differences and epistemological controversies. Both Metz and Lesko encouraged their students to articulate their different understandings of research, challenge one another's beliefs, and interrogate their own positions. Thus, students did not simply learn *about* contentious methodological issues. Instead, they *experienced* these issues on a personal level. Conversations were often uncomfortable and provoked

22. Gadamer also writes, "What emerges in its truth is the logos, which is neither mine nor yours and hence so far transcends the interlocutors' subjective opinions that even the person leading the conversation knows that he does not know" (*TM*, 361).

23. Jane Roland Martin, *Reclaiming a Conversation: The Ideal of the Educated Woman* (New Haven, CT: Yale University Press, 1985), 10.

students to experience self-doubt. Despite the fact that their courses were unsettling, Metz and Lesko concur that they benefited students.

Metz and Lesko seem to offer exemplars of *Bildung* in doctoral education. Upon close analysis, however, it is evident that both scholars back away from Gadamer's premise that experiencing self-doubt by engaging with difference transforms understanding. Summarizing key points in their articles, I will show how each scholar approaches *Bildung* yet ultimately fails to embrace this concept. In the next section, I will consider reasons for their hesitation.

METZ

Describing the goal of her course, Metz explains that she and her colleagues wanted students

to learn an empathic appreciation for quite different kinds of research. We wanted them to make explicit the different tacit assumptions in their own approach and the new one, and thereby to see some limitations in their own kind of work that were matched by strengths in the others. Rather than teaching them an approach to master, we exposed students to controversy and asked them to tolerate, even to appreciate, ambiguity in seeing the value of disparate forms of research. (*IBC*, 15)

In short, Metz writes, "the task we set students ... required a degree of unlearning as well as learning" (*IBC*, 15).

To facilitate methodological comparisons, Metz and her co-instructors developed a "Common Anatomy for Social Scientific Work in Education" that highlighted "building blocks in research that seem to be common across quite distinct traditions" (*IBC*, 13). The instructors anticipated that conversations about their "Common Anatomy" would be cognitively challenging for students. They did not anticipate the emotional turmoil these conversations engendered for students and for themselves.

Instructors were frustrated and stunned by how differently they understood methodology. "While these moments of shock with one another's understandings of the research process" were "critically clarifying," Metz admits that co-instructors often "talked past each other despite consistent effort and good will on everyone's part" (*IBC*, 14). In hindsight, she reflects, this was not surprising. "Studies of interdisciplinary teams consistently find they experience more difficulty communicating than they anticipate" (*IBC*, 14). Similar to fields such as ecology, education and educational research are characterized by discontinuities of language and different formative metaphors. "Two educational researchers may live in intellectual worlds that are deeply divided by language and assumptions," Metz observes (*IBC*, 14).

"If experienced faculty were struggling," she continues, "students surely were [struggling] as well" (*IBC*, 14). By way of illustration, Metz cites an essay by a student named Delores Strom. "At various times during the seminar," Strom wrote,

we each found ourselves either questioning another student's fundamental assumptions, or struggling to articulate and defend our own assumptions against such questioning from another student. Sometimes these discussions became very uncomfortable. At one point or another,

most students found themselves involved in a soulsearching [sic] identity crisis that was instigated by the seminar. There definitely were times when I dreaded the seminar and joked that if I had to deal with one more existential funk brought on by our discussions of ontology and epistemology, I was sure that my mind was going to snap. (*IBC*, 15)

Strom's reaction, Metz explains, typified how many students felt about the course.

To address students' discomfort, Metz and her colleagues instituted three reforms. First, during the second year that the course was offered, Metz cotaught it with a colleague who was particularly adept at leading discussions. "The class became predominantly the discussion class that we had hoped for," she writes. "Consequently, we did better in creating a sense of community in the seminar than my colleague and I had done in the first year" (*IBC*, 16).

Second, the class was offered later in the doctoral program.²⁴ This change reflects the instructors' contention that beginning doctoral students do not yet "feel secure enough in their own fields to look across fields" (*IBC*, 15). Metz elaborates:

The border crossing and the examination of first premises in the seminar comes at a point in students' lives when they are forming incomplete, fragile understandings of research in their disciplines. Through their time in graduate school, they are becoming apprentices, then tentatively becoming practitioners of research. This course may seem to intrude on that process, as it throws assumptions into doubt, suggesting that there are alternative meta-theories, theories, methodologies, methods, and meaningful research questions. Strong and sensible people can feel threatened in that situation. (*IBC*, 15)

Delaying the course gave students a chance to strengthen their understanding of their own methodologies and gain confidence in their ability to explain their methodologies to students from different backgrounds. "On the whole," Metz writes, "we found that third-year students were less emotionally rocked by the seminar experience" (*IBC*, 16).

Finally, students were given opportunities to exert leadership over the course's content and activities. This change, Metz observes, aligns with research on doctoral education, which confirms the importance of peer interchange and support (*IBC*, 16). One change that students instigated pertained to how they compared the limitations and strengths of different methodologies. Rather than critically examine their own projects, students chose to critique the work of professors whose research matched their own substantive interests and methodological backgrounds. Metz notes that this change "allowed students to discuss their kind of research and to present it as quasi-experts, without having to expose their own novice efforts to critique and criticism" (*IBC*, 17).

As a consequence of these reforms, "students reported much more positive and much less negative affect about their participation" (*IBC*, 17). Nonetheless, Metz acknowledges that changes to the course did not clearly improve it. Although better discussions contributed to an enhanced sense of community, "ironically,"

24. It is unclear to me whether Metz instituted this reform, or whether she is suggesting that teachers should consider delaying research seminars until after the first year of a doctoral program.

she observes, "it also made visible some tensions based in both intellectual and personality differences, that developed between group members" (*IBC*, 16). Further, while third-year students may have felt more secure as researchers, Metz admits that "as a person gets a sense of confidence in a research approach, the motivation to go back to first questions, or to take time to delve into very different approaches, may decrease significantly" (*IBC*, 16). Finally, offering students opportunities to exert leadership over the course may have afforded them opportunities to exercise control over their learning; however, the change that students instigated — critiquing professors' studies rather than their own — "constituted paths to avoid the threatening tasks of uncovering and grappling with first premises in their own and others' work" (*IBC*, 16).

In short, the changes Metz and her colleagues instituted to make the course less disconcerting brought differences among students to the surface. Rather than helping students learn from their differences, however, the changes allowed students with different perspectives to avoid the discomfort of challenging one another's assumptions. Thus, Metz and her colleagues ended up sabotaging a key aim of their course: to have students "unlearn" their beliefs and tolerate ambiguity.

Despite these problems, Metz writes, "[i]t was common for students to resist the work in some way while it was going on and then to appreciate its benefits later" (*IBC*, 16). When asked to evaluate the class, many students "said the pain was worth the gain" and that "they would do it again, despite the travail it engendered" (*IBC*, 17). Metz does not detail when or why students' resistance to the course dissipated. Nor does she suggest how to address students' discomfort without compromising the course's key aims. She stresses, however, that methodological differences coupled with the diversity of students' backgrounds renders "the bounds of a carefully planned syllabus only a background map for a trip that was far more wide ranging, over roads more winding, than the neat syllabus/map indicated" (*IBC*, 13).

LESKO

Lesko's doctoral core course (DCC) "pushed on political, epistemological, and paradigmatic fissures" and "regularly asked students to acknowledge and interrogate their own positions" (*PM*, 1546). Students were encouraged to "relearn beliefs about education in terms useful for research within theoretical traditions that were often new to them" (*PM*, 1547). This work was "a process of unknowing," Lesko explains, "but not a willing one." It "induced a monstrous crisis of 'mastery' and of community as students struggled to 'get it' — to use the language of educational research in talk and in writing" (*PM*, 1547). Lesko cites the experience of a student named Savannah, who called home weekly to vent about "the latest installment of her identity crisis. . . . [T]here was something about this new doctoral core course that disoriented her" (*PM*, 1542).

Genuine learning, Lesko maintains, always interferes with students' assumptions. Moreover, she declares, ambivalence and anxiety characterize our postmodern age (*PM*, 1548–1549, 1559). Lesko thus intimates that she expected students

to experience self-doubt as a consequence of engaging with different perspectives. Nonetheless, she was unprepared for her students' "unusually strong" reaction to her class and did not anticipate the intensity of their attempts to resist it (*PM*, 1541). Students' "highly charged responses to the DCC seemed to exceed self-doubt," Lesko observes (*PM*, 1547). "These disturbances — encounters with ambivalence, and the awareness of more than one way to interpret, categorize, and feel about phenomena — were related to instances in which their reading, perceptions, and identities were brought up short, and they shifted into the fantastic, into the territory of ghosts and monsters" (*PM*, 1559).

Lesko and her colleagues wondered: "What does the pain of doctoral education involve, and do we deem pain as a necessary component of confronting epistemological diversity?" (*PM*, 1548). To systematically investigate this question, the research team designed and conducted a qualitative action-research study. They drew on theories of monsters from film studies to identify particular beliefs that the course disrupted for students (*PM*, 1550). Collective memory methodology and Wendy Hollway and Tony Jefferson's theory of the defended subject helped the team analyze specific strategies of resistance students employed to protect themselves from the discomfort that the course engendered (*PM*, 1552–1553).

The team found that the course interrupted three beliefs. The first belief pertained to students' expectations for community. Students hoped that class discussions would foster harmonious relationships. Exchanges between students instead brought disagreements to the surface. "In a course that sought to introduce multiple perspectives on reading and conceptualizing research, it was inevitable that students with otherwise close social ties would disagree," Lesko reflects. "These disagreements caused waves of ambivalence, with attendant discomfort and hesitation toward the reading, the course, instructors, peers, and doctoral education as a whole" (*PM*, 1550).

The course structure contributed to students' sense that the class community was tenuous. Although all instructors participated in class discussions, "deference was given to the 'lead' facilitator to frame their presentation from their own theoretical orientation" (*PM*, 1558). This strategy gave students the impression that methodological experts could not be questioned and that those who lacked authority were supposed to remain silent. As a result, many students felt excluded from participating in class conversations.

The second belief that the course disrupted concerned students' "idealized views about researchers' rationality, objectivity, and unambiguous findings" (*PM*, 1561). Students assumed that valid findings are unassailable. The notion that good research is "messy," and that findings are partial, uncertain, revisable, and imbued with political interests, may have been especially troubling for students "who expected to receive commodified units of knowledge available for use in professional advancement" (*PM*, 1549).

Finally, the course unsettled students' beliefs about grades. Lesko notes that grades were assigned in order "to make doctoral knowledge explicit rather than tacit and [to] produce high-caliber education scholars" (*PM*, 1555). But grades

also highlighted students' tentative understanding of the course material. Good students began to doubt their intellectual ability. This sense of uncertainty, Lesko stresses, "was a palpable element of the course that shook the confidence of students who were experienced and successful educators outside the [doctoral course]" (*PM*, 1547).

Students employed two primary strategies of resistance, the team found. First, they resorted to what Lesko calls "discursive shifts." Discursive shifts were attempts to recuperate "stable ideas of knowledge, self, and community through talk of authentic learning, noncompetitive peers, caring professors, and a harmonious academic community" (*PM*, 1559). Additionally, students "split" the course from the rest of their lives. "Students defended their identities as good people," Lesko explains, "by defining the DCC as an unreal or merely performative context. The casting of a research preparation course as unreal released students from interrogation of their disavowed actions, and it reiterated familiar, stable, and valued categories of authentic learning and internal motivation" (*PM*, 1557). The tendency to split was especially apparent when students' behavior in the class conflicted with their self-image.

To mitigate students' resistance, Lesko and her colleagues scaled back on reading and writing demands and broke the course into three linked yet self-contained classes. They also developed assignments that invited students to rethink the course. "These assignments," Lesko writes, "seemed to offer possibilities for them to be the ones challenging ideas, theories, epistemologies, and paradigms rather than always being challenged by others. Alternating between challenged and challenger seemed to offer more comfortable experiences with critical questioning" (*PM*, 1561).

Lesko reports that students who took the course wrote better qualifying exams, developed clearer dissertation proposals, and grew more practiced in academic writing. "Nevertheless, the DCC remains contentious," she admits (*PM*, 1544–1545). Dividing the course into three linked yet self-contained classes served to "highlight how central lower-than-usual grades are to the characterizations of the course as monstrous and the professors as uncaring" (*PM*, 1564). Creating opportunities for students to grow more comfortable with critical questioning also failed to counter students' resistance to the course. "New positions such as co-researchers would likely produce other ambivalences and discursive shifts," Lesko warns (*PM*, 1561).

In short, Lesko concludes, courses that engage students with "epistemological controversy and diverse perspectives are bound to disturb and unsettle relations among knowledge, self-mastery, and social networks for all involved" (*PM*, 1562). The emotional turmoil and resistance that students experience makes it difficult to design, manage, and assess these classes. "Our interpretation has emphasized how the course took on a life of its own, like Frankenstein," Lesko writes, "achieving effects beyond the original intention and desires of its creators and students" (*PM*, 1559).

METZ, LESKO, AND *BILDUNG*

Education scholars argue that research preparation courses should help doctoral students construct their professional identities.²⁵ By contrast, Metz and Lesko argue that research preparation courses engender self-doubt. Self-doubt is painful; students neither anticipate nor want this experience. Metz's student, Delores Strom, and Lesko's student, Savannah, described self-doubt as a disorienting existential crisis. Lesko uses the phrase "brought up short" to characterize the degree of disturbance her students felt when their assumptions and sense of self were shaken.

Metz and Lesko stress that we cannot foresee or control how or when self-doubt will erupt. A syllabus cannot contain the direction of these courses; like Frankenstein's monster, they assume lives of their own. Moreover, students may not be the only ones who are pulled up short by research classes, Metz and Lesko suggest. Preparing students to become researchers can unsettle teachers as well.

Examining how self-doubt arises in the process of engaging with difference, and highlighting the existential, unforeseen, and disquieting nature of this experience, Metz and Lesko's accounts of self-doubt resonate with Gadamer's idea of *Bildung*. However, their students stopped short of engaging in *Bildung*. Despite the intention of both instructors, students defended their beliefs against classmates who challenged them and did not regard self-doubt as conducive for learning.

Metz notes that despite their initial resistance, some students came to believe that the pain of her course was worth the gain (*IBC*, 17). It is therefore possible that some of her students engaged in *Bildung* during their time in her class but may not have appreciated or realized this until later. It also is possible that Metz's course planted the seeds for students to engage in *Bildung* later during their program.

But while *Bildung* may have transpired in Metz's class, she does not explain how or why this phenomenon occurred. Lesko's detailed analysis of why students thought her course was monstrous suggests that although her students may have been on the verge of *Bildung*, they ended up actively resisting this experience.

How can teachers help students regard self-doubt as transformative, making it more likely that they will engage in *Bildung*? Following Gadamer, I contend that helping students learn to embrace rather than resist self-doubt

25. See, for example, Leigh A. Hall and Leslie D. Burns, "Identity Development and Mentoring in Doctoral Education," *Harvard Educational Review* 79, no. 1 (2009): 49–70; Anna Neuman, Aaron M. Pallas, and Penelope L. Peterson, "Preparing Education Practitioners to Practice Education Research," in *Issues in Education Research: Problems and Possibilities*, ed. Ellen Condliffe Lagemann and Lee S. Shulman (San Francisco: Jossey Bass, 1999), 247–288; Anna Neumann and Aaron M. Pallas, "Windows of Possibility: Perspectives on the Construction of Educational Researchers," in *The Sage Handbook for Research in Education*, ed. Clifton F. Conrad and Ronald C. Serlin (Thousand Oaks, CA: Sage, 2006), 429–449; and Lee S. Shulman, "Foreword," in *The Formation of Scholars: Rethinking Doctoral Education for the Twenty-First Century*, ed. George E. Walker, Chris M. Golde, Laura Jones, Andrea Conklin Bueschel, and Pat Hutchings (San Francisco: Jossey-Bass, 2008), ix–xiii.

begins with interrogating our assumptions concerning the value and necessity of engaging with difference. Upon close examination, it is evident that neither Metz nor Lesko recognizes how or why engaging with difference promotes understanding.

Citing research, Metz concludes that cross-disciplinary conversations are difficult because researchers from different traditions are separated by epistemological and linguistic gulfs that cannot be easily bridged. Unlike Metz, Lesko believes that agreement stymies understanding. She therefore highlighted her students' differences. She also encouraged them to question their assumption that sustaining a classroom community requires classmates to endorse one another's views. But in arguing that engaging with difference necessarily "interferes with normal (and believed beneficial) education relations between teachers and learners" (*PM*, 1560), Lesko offers no vision of how students can challenge one another and at the same time contribute to a trusting, caring classroom community that makes it safe for transformations of understanding to arise through self-doubt.

The failure to imagine how engaging with difference supports understanding reflects a particular view of conversation and agency. Both Metz and Lesko assume that individuals must formulate and test their beliefs *before* they encounter others with different perspectives. Making understanding explicit ahead of time enables individuals to see how others' views either align with or diverge from their own.

On this view of conversation, individuals are self-regulating agents who construct and metacognitively regulate their own thinking. One's beliefs may change or become clearer as a *result* of conversing with others. But conversing with others is not necessary for understanding to arise in the first place; engaging with others is not the condition that makes understanding possible. Engagement does not "construct" understanding; *we* do.²⁶

Metz clearly assumes this picture of agency and conversation. In order to develop "an empathic appreciation for quite different kinds of research" (*IBC*, 15), she created opportunities for students to explicate their own understanding of research and gain confidence in their ability to explain their understanding to others. Metz further hoped that delaying research preparation courses until the third year of a doctoral program would strengthen students' understanding of their own methodology. As a result, they would not feel rattled when classmates with different backgrounds question their positions.

Unlike Metz, Lesko problematizes the assumption that individuals are self-regulating agents. She also recognizes that conversations have a spirit of their own. Nonetheless, Lesko does not perceive how monstrous conversations can transform understanding. Lesko advised students to assume the role of either the "challenger" or the "challenged" before conversation begins. In subsequent

26. For a nice discussion of this point, see Glen L. Sherman and William Patterson, "Hermeneutics and the Traditions of Student Development and Learning," *Journal of College and Character* 12, no. 2 (2011): 3–10.

conversations, students could reverse these roles. Lesko's advice presumes that dialogical roles are detachable from conversations and that interlocutors can deliberately choose to take them up. She does not conceive that dialogical roles arise in the course of conversation itself and that these roles are reciprocal, not transitive. She also does not imagine that in challenging our partner's perspective, we also are challenged by our partner in ways neither partner foresees or necessarily desires.

In short, both Metz and Lesko assume that individuals are self-regulating agents who can and must articulate their understanding of a topic before they can engage in conversation with others. Metz clearly subscribes to this "constructivist" picture. Lesko wants to problematize constructivist agency; however, her failure to imagine how monstrous conversations can transform understanding suggests that constructivist agency continues to influence her thinking, albeit unconsciously.

As Metz and Lesko suggest, teachers who subscribe to this network of interlocking assumptions may be less likely to imagine how engaging with difference and experiencing self-doubt can be productive for learning. In fact, such an approach may have the opposite effect: when students in both Metz's and Lesko's classes encountered their classmates' different perspectives, they responded by defending their beliefs, avoiding questioning them, and/or trying to empathize with classmates without seriously considering how their classmates' views challenged their own beliefs. Rather than regard self-doubt as transformative, students perceived engaging with others as threatening and protected their sense that they are — or should be — in charge of themselves and their own learning.

Arguing that insight arises when interlocutors with different perspectives allow themselves to be caught up in conversations they neither direct nor desire, Gadamer proposes that human beings are not self-governing agents. Rather, we are deeply dependent on others and are embedded in situations we cannot fully escape. We are more limited than we like to think, Gadamer claims. This situation does not foreclose understanding; on the contrary, it is the condition that makes understanding possible.²⁷

Helping students engage in *Bildung* thus requires teachers to conceive of difference, agency, and conversation in ways that neither Metz nor Lesko clearly articulates. Conversing with others whose perspectives challenge our view of an issue is an opportunity to test our *own* beliefs. We cannot foresee and may not like what our partner's questions reveal about our position. Hence engaging with others can be unsettling and provoke self-doubt. Nonetheless, when partners with different "horizons" lose themselves in conversation together, they can come to understand issues in ways that neither partner could realize without the other.

In demonstrating how to reframe self-doubt in terms of *Bildung*, Gadamer provides a way forward for Metz and Lesko. How might they draw on Gadamer

27. For an excellent discussion of Gadamer's view of the human condition, see Gerald L. Bruns, *Hermeneutics Ancient and Modern* (New Haven, CT: Yale University Press, 1992), 179–194.

to rethink their pedagogy and help their students become positively disposed to self-doubt? To answer this question, I will consider specific examples from each of their articles.

Recall that Metz and her colleagues developed a "Common Anatomy" for educational research that they used to guide class conversations. Discussing their rubric, co-instructors were stunned by how differently they interpreted it. At times, Metz notes, these moments of shock were clarifying. She admits, however, that many times colleagues talked past one another.

While these moments of shock may have been unpredictable, Metz and her colleagues could draw attention to them as learning opportunities. To do this, they could ask themselves the following questions: As a consequence of questioning each other, what did each of us learn about our own understanding of research that we had not previously recognized? What do we learn about ourselves? As a consequence of being challenged, was our understanding of our work and ourselves "pulled up short" and perhaps refuted, or possibly clarified and/or extended in ways we had not foreseen?

Following such an approach, Metz and her co-instructors could demonstrate for students that anyone can improve their understanding of research and of themselves, provided they are open to being challenged by a partner with a different perspective. Even professors have something to learn from one another. These conversations are not necessarily easy. But explicitly acknowledging discomfort can establish this emotion as a norm and make it less threatening or shameful for both students and teachers. Modeling these difficult conversations may make it less difficult for students to engage in them.

Lesko reports that she and her colleagues emphasized their methodological differences and deferred to one another's areas of expertise. For certain purposes, relying on experts makes sense. Experts may be better able to explain methodologies to students who are unfamiliar with them. In deferring to one another as lead facilitators, however, Lesko and her coteachers created the impression that expert understanding cannot be questioned. Consequently, they unwittingly contradicted the aim of their course and fueled their students' resistance to learn from their differences.

To counter the impression that those with less background lack the requisite understanding to query experts, nonexperts could question experts about aspects of research that they share. (Metz's "Common Anatomy of Research" could perhaps guide Lesko's discussion.) As Gadamer reminds us, conversations cannot get started without some overlap of understanding between partners. Moreover, we cannot construe differences unless we place them against a common background. Accordingly, no interlocutor can be dismissed because she lacks expertise in a particular methodology. Assuming a principle of charity, Lesko and her colleagues could agree that they all have some understanding of research and that they all have a basis, however inchoate, on which to question one another. Experts and nonexperts together could consider the following questions: How do our different perspectives deepen our understanding of the research enterprise we share? What

do we learn from one another about research that we had not previously understood on our own? What do we learn about ourselves?

While Gadamer can help Lesko reframe her teaching practices, Lesko raises questions about *Bildung* that Gadamer does not adequately consider. Gadamer argues that new understanding arises from familiar positions. Hence if students are to learn from those who challenge their assumptions, they must on some level *already* be open to experiencing self-doubt. "Reaching an understanding in conversation," he writes, "presupposes that both partners are ready for it and are trying to recognize the full value of what is alien and opposed to them" (*TM*, 388). But Gadamer also believes that understanding is porous. Thus even though a student may not be ready to engage in conversation on a particular occasion or with a particular person, he or she retains the capacity to become (more) open. This predilection may be faint. On principle, however, it can be cultivated through education.

Lesko's detailed portraits of resistance raise the possibility that human beings should not always be as open as Gadamer imagines. This is not necessarily pathological. Some differences may not be productive for learning. Students therefore would be right to resist them. Teachers must be able to distinguish differences that broaden students' horizons from differences that prevent them from realizing and/or enacting changes in their points of view.²⁸

CONCLUSION

The idea that research preparation courses should engage students with epistemological controversies and methodological differences is widespread. Metz and Lesko show that when research courses are guided by this aim, students likely will experience self-doubt. Gadamer reframes self-doubt in terms of *Bildung*. In so doing, he suggests that self-doubt, while uncomfortable, can be transformative. Gadamer's view of self-doubt demonstrates that being open to differences allows new understandings to emerge in conversations that "claim" participants in ways they do not control and may not desire. Gadamer thus challenges the constructivist picture of agency prevalent in education today. He also disputes the common assumption that reaching agreement through dialogue requires interlocutors to mitigate or overlook their differences.

Is this a good thing? Should research preparation courses purposely aim to help doctoral students engage in *Bildung*? I think Metz and Lesko would join Gadamer in saying "yes." Structuring conversations so that students can test their own understandings of research by being open to classmates with different backgrounds can broaden the horizon of understanding for all participants. Consequently, students may become interested in methodologies they had not previously considered and may also be better prepared to collaborate across methodologies. Finally, cultivating *Bildung* can help students check the tendency to exclude evidence that challenges what they already know or want to believe.

28. Some differences may perpetuate injustice, for example. For more on this point, see Georgia Warnke, *Justice and Interpretation* (Cambridge, MA: MIT Press, 1993), 134.

The fact that self-doubt accompanies *Bildung* indicates that students are affected by their classmates' challenges. Because this is uncomfortable, openness to self-doubt must be supported by moral dispositions, including modesty, humility, the courage to be vulnerable, a willingness to take risks, and the maturity to acknowledge one's limitations. Students can become better people by cultivating these dispositions. In this respect, research preparation that incorporates *Bildung* is not simply an exercise in methodological training. More profoundly, research preparation can be a type of transformative *education*.

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