Constructivism, Dewey, and Academic Advising

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Many published scholars argue for constructivism as a basis for academic advising theory. However, few have discussed the commensurate ontological assumptions of constructivist thinking. Potential problems with the metaphysical view of the student in contemporary academic advising may be attributable to constructivism. John Dewey's critique of dualism suggests that although constructivism proves fruitful for practice, academic advisors may need to reexamine the use of it to avoid creation of educationally harmful conditions for students. They can begin this investigation by looking at the work of John Dewey and by reconsidering their own assumptions about knowing and learning.

Academic advising theorists have regularly bandied about the term *constructivism* (Hemwall & Trachte, 2005; Lowenstein, 2013; Melander, 2005; Musser, 2012; Musser & Yoder, 2013; Schreiner & Anderson, 2005; Schulenberg, 2013). Musser (2012) advanced the idea that "constructivism lays the foundation for the current and historical theories and practices" of the advising field (¶4). Frequency of reference, coupled with Musser's claim of significance, suggests that advisors should examine constructivism closely to better understand the implications of using it for advising students.

Constructivism, a theory of knowing, serves as an account of how a person comes to know. In this article, constructivism is described as a window into deeper questions about the makeup of the student: When constructivism is accepted as the root epistemology of academic advising,

- what else is also accepted about the fundamental ontology of the student in academic advising?
- who or what is the student assumed to be?

The analysis primarily draws on the philosophy of John Dewey, a thinker and educator of unparalleled influence in 20th-century educational thought. Although Dewey's view resembles constructivism in some ways, such as a shared belief in the significance of both knowing and doing for education, Dewey's ideas on the relationship between knowledge and action differ from those of constructivists. The differences emerge when looking at Dewey's forceful critique of the metaphysical condition of dualism. Dewey (1922, 1929a, 1929b, 1916/1944) presented a picture of who or what the student is in a way indiscernible through constructivism alone, and his point of view provides means to evaluate dualism in a way that encourages advisors to reconsider the characterization of knowing and one who knows.

The proposed reexamination of constructivism encourages the practitioner to reassess the fundamental assumptions about the student: who he or she is and the expectations of him or her. In addition, some of the troubling complexity of Dewey's work is addressed, revealing the relevance of it for academic advisors. Readers acquainted with Dewey's philosophy will note, however, that the following discussion intentionally omits any reference to Dewey's idea of *experience*. Technical and fraught with nearly a century of misapplication by educators, that topic requires an article dedicated to the intricacies of the issue.

Knowing

Making Knowledge

From the philosophical literature of education, Bredo (2000) supplied an excellent interpretation of constructivism: "Knowledge is made rather than found" (p. 131). *Making* resonates with the sensibilities of contemporary academic advisors in a way that *finding* does not. *Making* implies creation and choice, decision and agency. *Finding*, although often a necessary aspect of advising—for example, finding contact information for a faculty member or finding a student's particular strengths and interests—carries a connotation of passivity and reaction. Finding can require a kind of understanding, even cleverness, but it assumes an established world in which the answer already exists in a suitable and recognizable form.

Advisors may see Bredo's (2000) contrast between making and finding reflected in the tension between developmental and prescriptive advising. Developmental advising is based on

collaboration between student and advisor that produces a new and unique outcome; prescriptive advising is associated with fixed hierarchical positions and definitive information that create an exhaustible set of possibilities regardless of advisor or student input (Crookston, 1972/2009). Constructivism has captured the imagination of advising theorists, in part, because it provides a compelling explanation, drawn from educational scholarship, for the preference of developmental over prescriptive advising: Making knowledge is deemed better than finding knowledge.

Like student development theory, constructivism did not rise from the native soil of academic advising (Bloland, Stamatakos, & Rogers, 1994; Crookston, 1972/2009). As advisors seek to research and conduct other scholarly activities to professionalize the field, practitioners and theorists seek to present their work as authentically educational, and in the process the texts of educational theory, including constructivism, have been brought to bear on academic advising. Many consider constructivism a theory particularly attractive for import. Educational philosopher D. C. Phillips (1995) found constructivism so widespread in educational thinking that he likened it to a "secular religion" and argued that rather than deliberating the value of the theory, educators have been converted: "All of us these days are constructivist" (p. 5). If Phillips is correct, and if academic advising is a subfield of education, advisors would naturally consider constructivism a viable operational theory; however, as with any transplanted perspective on practice, the roots of constructivism may remain invisible to academic advisors. Therefore, Bredo's (2000) description needs a closer look.

The significance of found knowledge has emerged from the work of Locke (1690/1997) and Freire (2002). Locke argued that knowledge comes from either an impression of the external world conveyed directly to the mind by the senses or an internal perception of the relationship between these mental impressions. In either case, according to Locke, knowing arises from the world etching itself upon the blank slate of the mind. Deeply skeptical of this idea, Freire (2002) famously criticized it as a "banking conception of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing deposits" (p. 72). When Bredo (2000) explained constructivism as "knowledge is made rather than found," he was expressing

rejection of the passivity that fundamentally characterizes modern conceptions of knowing and learning (p. 151). Bredo contended that creative agency substitutes passivity in learning.

Individual Constructivism: Von Glasersfeld's Three Claims

Thinkers as diverse as Kant and Kuhn have adopted a disposition for active knowing (Phillips, 1995). The prodigious constructivist tent covers members who aver that society is the agent of knowing and that knowledge is socially constructed as well as those who argue that the individual acts as the agent of knowing. In the claim about constructivism and academic advising, Musser (2012) offered specific guidance about the school of thought prevailing in academic advising, asserting that constructivism at the individual level, as described by Piaget (1970) and von Glasersfeld (1995), prevails in practice that Cobb (1994) calls *psychological constructivism*. Piaget receives recognition by academic advisors precisely because of the association of his ideas with the psychological development of college students (see, e.g., Pascarella & Terenzini, 1991). von Glasersfeld, a devotee of Piaget, but perhaps less widely known, has gained increased prominence in educational literature through his efforts to work out Piaget's notoriously opaque work on child psychology and apply it to the practices of teaching (Vanderstraeten & Biesta, 1998; von Glasersfeld, 1995).

For thinking about constructivism in the context of practice, advisors may find von Glasersfeld more directly relevant than Piaget. In his masterwork, *Radical Constructivism: A Way of Knowing and Learning,* Ernst von Glasersfeld (1995) provided a synopsis of his view on constructivism as pertaining "to the ways and means the cognizing subject has conceptually evolved in order to fit into the world as he or she experiences it. . . . It is intended as a theory of knowing, not a theory of being" (p. 114). Three von Glasersfeld claims characterize the discussion presented herein.

First, von Glasersfeld (1995) suggested that knowing occurs at the level of the individual, with *subject* being the epistemological term for this individual. The subject as knower is distinguished from the *object* of knowledge. Glasersfeld's distinction between subject and object provides the fundamental basis for his other points on knowing.

Second, von Glasersfeld (1995) emphasized conceptual evolution as the process by which the subject adapts to the world. Pressure to fit into the environment has created in the subject a certain pattern of thinking, a set of universal mental moves. von Glasersfeld (1995) sees Darwin's work as providing the key mechanism for cognition: As a result of natural selection, human thinking has evolved so that sensory perceptions are manipulated and organized in beneficial, if necessarily circumscribed, ways (pp. 42, 43, 50).

Third, von Glasersfeld (1995) drew a clear line between knowing and being as well as between mental representations and independent existence for the source of those representations. According to von Glasersfeld, one can understand knowing as an independent concept by attending to uniqueness that extends above and beyond the uniqueness of existence. An example drawn from academic planning shows the application of von Glasersfeld's three claims in practice.

von Glasersfeld's Constructivism Applied to Academic Planning

A central piece of the academic advisor portfolio—assisting students with academic planning and understanding the degree—involves the process of cognizing, as per von Glasersfeld's (1995) first constructivism point, the academic plan in specific terms, such as necessary course work as well as the purpose and conceptual underpinnings of the major. The resulting plan, a mental object, likely rich and layered, remains invisible to the advisor. A student may describe the image of the plan to an advisor, but the verbal or written form reflects an interpretation of the student's ideas. The plan itself, as a constructed mental object, is not the student's list or the essay; the essence and nature of the plan completely differs from the essence and nature of the written or spoken description of the plan.

According to von Glasersfeld's (1995) second point of constructivism, the student's plan—a mental construction—must take one of a limited number of forms. The plan will always show the imprint of the human rationality used to create it. For instance, the plan will progress through time in only one direction and events will unfold in a sequential manner. The plan will reflect recognition that smaller elements combine to make larger ones (e.g., one credit plus one credit equals two credits). So, although the plans of different students contain different choices and details, the standards used to create any academic plan share common universal aspects of rational thought.

Student development theories, most grounded with an understanding of rational student cognition, are replete with descriptions of cognitive objects at different stages of the student's development (see, e.g., Chickering, 1969; Erikson, 1959; King, 2009; Perry, 1970). These theories constitute a standard of rationality that many academic advisors use to evaluate and guide student thinking. With this understanding, academic advisors help students improve their academic plans as cognitive objects. For example, learning-centered advising places additional emphasis on harnessing the student–advisor relationship to expand and apply student rationality to academic decision making (Lowenstein, 1999, 2005).

von Glasersfeld's (1995) third claim, that knowing can be addressed without consideration of other influences, suggests that a student's academic plan may or may not refer to an actual series of events. The plan, as a cognitive object created with the rules and principles of rationality, can be explored, manipulated, evaluated, and improved using only the tools and techniques of rationality (e.g., logic and mathematics). For example, to maximize efficiency of the plan, advisors and students evaluate academic plans against the number of credits students must take before graduation. They may remove classes from academic plans when the student has taken the required number, and they may address (or readdress) choice of major based on hiring data for employers of college graduates.

Academic advisors will appreciate all the conversations surrounding academic planning; however, they may not recognize that they reflect an assumed totality of the relevant considerations that lead to knowledge in academic planning. The reasons for these assumptions comprise the key issues used to distinguish made knowledge from found knowledge. The example of advising in academic planning demonstrates a clear acceptance that, as put forth by von Glasersfeld (1995), knowledge is made. Furthermore, as von Glasersfeld suggested, knowledge (like that recognized in academic planning) is made in a certain way; that is, it is inspired by the data acquired through senses, but it is not merely moved from an external world into the mind for storage. Instead, sensory information fuels the machinery of human rationality to produce a cognitive object

that can be evaluated, judged, and improved by the terms that define it.

Being

Idealism

von Glasersfeld's (1995) assertion that constructivism focuses on knowing, and not on being, places his ideas within a tradition of philosophical *idealism*. Although this philosophical tradition stretches back into the 17th century, Kant's 18th-century writings remain the recognized masterwork of idealism, and for the purposes presented herein, mark the initial constructivism movement (Kant, 1781/2007; Phillips, 1995).

Idealists suggest that only the knowledge cultivated from a subject's thinking is truly known to that subject. The idealist may explain this idea of knowledge by saying, "Things we can know for sure are those things we generate for ourselves via careful reasoning." Furthermore, the idealist believes that subjects cannot remove themselves from their own reasoning processes to verify the existence of the very object of their reasoning. They explain, "We can't compare the thing in itself to the thing as it really is independent of whatever we think about it."

The idealist will point out that evaluation of an object of thought requires an act of judgment, which like the thought about the object, is based on reason; that is, any claims to knowledge can only be grounded in the internal cognition used to create it. The idealist may state this limited assessment of an object this way: "The very thing the subject is trying to isolate for determination of existence is what they used to determine its existence in the first place. Thus, there is no hope of knowing the thing in itself."

von Glasersfeld (1995) suggested that the proper warrant for knowing rests with the logical, consistent, and rational mental conceptions that subjects can verify. Idealists would explain, "For creating knowledge, what matters is not some inherent quality of an object in itself (because there's no way to verify what that is) but how the cognizing subject constructs an idealized object that coheres with the other objects he or she has already created." von Glasersfeld leaned on the writing of his intellectual hero, Piaget, to explain, "Only by adding something to perception do we discover the characteristic of an object" (as cited in Phillips, 1987, p. 166). *Something* in this context refers to rational structure. An idealist may simplify the idea by stating, "Objects cannot speak for themselves." Only the mental apparatus of the subject can bequeath form, function, and essence to the subject's interactions with the environment.

Mind–Body Dualism

von Glasersfeld's (1995) acceptance of a self-contained, subjective cognition that fundamentally differs from the surrounding environment provides the fuel for the argument that his brand of constructivism comes from the metaphysical arrangement known as *mind–body dualism,* which proponents may explain as consisting of "two primary kinds of things that exist in the universe: mental things and material things or *minds* and *bodies*." Dualists explain that despite their interactions with each other, minds and bodies never absorb each other nor are reduced to one or the other.

Described in one form or another for a very long time, mind–body dualism gained popularity through the French philosopher Rene Descartes (1641/1993), who effectively leveraged it in a mid-17th century quest for certainty and truth. Descartes used mind–body dualism to create the mathematics-based science studied in the West today. Descartes argued that because human senses tend to imperfection, information garnered through them is liable to be faulty as well. The senses, the body in general, indeed the larger material world, must therefore be considered with skepticism. Descartes distinguished the body from the mind, the *cognito*, used to think about the body (and everything else). He explained that the mind is not part of the body because it cannot be doubted or wished away as can the material world. Critics might argue that the skepticism necessary for dualism requires thinking, and that thinking is being questioned through constructivism. Descartes would respond that the mind is fundamentally different from the body. Today, the constructivist embracing von Glasersfeld invokes Descartes's philosophy of mind–body dualism to answer the question "who knows?"

To the extent they subscribe to von Glasersfeld's (1995) version of constructivism, academic advisors have inherited the Cartesian view of the cogito; that is, they assume a fundamental split between subject and object, which in context means between student and environment. The separation of student from environment reflects the practitioner's interest in achieving certainty, clear and distinct understanding, knowing. The constructivist academic advisor focuses on

students' ideas, mental constructs, and reasoning because they assumedly reflect the most reliable—the most true—version of students' realities. Ultimately, the constructivist academic advisor cares little about students' use of those ideas for outcomes. Rather, the processes of interacting with class formats and course work, gathering data and information about major and careers, communicating with other students, and engaging with the campus provide sensory input for refining the operation of student rationality.

Arguments Against Dualism

Dewey responded differently from von Glasersfeld (1995) to the question "who knows?" Dewey saw the mind–body dualism originally described by Descartes as the original sin of modern educational theory. In his landmark work, *Democracy and Education,* John Dewey asserted, "It would be impossible to state adequately the evil results which have flowed from this dualism of mind and body, much less to exaggerate them" (1944, p. 141). According to Dewey, mind–body dualism in education manifests in two different ways: mind over body and body over mind. In academic or liberal arts education, the mind is privileged over body because knowledge, fully formed prior to student engagement with it, is regarded as fundamentally fixed, universal, unchanging (e.g., mathematics). Because certainty stands opposite change, teaching and learning in the academic tradition consist of what Dewey calls transmitting and receiving "eternal truths" (1944, p. 265).

Dewey also criticized dualism that puts the body over the mind in the education context. Dewey (1916/1944) warned of vocational education that compels students to produce behaviors as "machine-like skill in routine" (p. 310). (For the record, I suggest that many have misunderstood Dewey's view on vocational education.) According to Dewey, the common implementation of educational practices such as vocational training, learning by doing, and experiential learning, in general, reverses the dominant element of dualism—from mind over body to body over mind—but does not eliminate it; Dewey suggested that changing the emphasis of dualism does little to remove the implied (or stated) bifurcation between mind and body, between knowing and doing.

Furthermore, Dewey (1916/1944) saw dualism in education as driving a wedge into students, splitting them into two parts, a spiritual part that grasps eternal truths and a mechanical part that interacts with the mundane world. So divided, students are reduced to passivity because by receiving the eternal they proffer no judgment, they only accept, and the effective and efficient production of knowledge is always desired and managed elsewhere by others. As a result, Dewey argued, seen through mind–body dualism, students do not control their education by design. Dewey (1929b) thought this role of students as spectators of the world, not shapers of it, a perversion of education.

Dewey's objection to dualism stems from appreciation of the natural phenomena that Descartes deemed unknowable. Dewey (1929a) explained that dualism "has to do with underlying metaphysical issues . . . the denial of quality in general to natural events" (p. 206). He believed that educational pursuits should not exclude the natural world or advance the notion that the overall physical environment carries little significance. Like von Glasersfeld, Dewey was strongly influenced by the work of Darwin. Unlike von Glasersfeld, Dewey rejected Cartesian dualism, deeming it incompatible with natural selection. Furthermore, Dewey claimed that dualism could be neither reformed nor developed into a useful paradigm for education. He insisted that educators need to reassert an assumption of continuity in nature rather than an assumption of division. Dewey (1922) gave an illustration of continuity:

> Breathing is an affair of the air as truly as of the lungs; digesting an affair of food as truly as of tissues of stomach. Seeing involves light just as certainly as it does the eye and optic nerve. Walking implicates the ground as well as the legs; speech demands physical air and human companionship and audience as well as vocal organs. . . . They are things done *by* the environment by means of organic structures or acquired dispositions. (p. 14)

In articulating his view on the metaphysics of continuity, Dewey (1922, 1929b, 1916/1944) did not separate human beings from everything else. Furthermore, because he saw human beings as particular manifestations of the environment, Dewey considered students integral to the force that makes up the environment. He explained that students do not merely engage in the environment as separate subjects living on the outside of it until they conceptualize sufficiently to fit into it,

as von Glasersfeld (1995) contended; rather, Dewey regarded the student as always and already inseparable from the environment, and always on par with it, nothing more or less. His ontological position is encapsulated in the following statement: Students are a wholly natural phenomenon, a manifestation of the world itself, without division and without exception (Dewey, 1944, p. 125). Only as a result of being in this state do students know.

Knowing: The Student In and Of The Environment

Dewey's (1922, 1929b, 1916/1944) naturalistic ontology entails a different picture of knowledge and knowing than that of constructivists. According to Dewey, any claim to, or warrant for, knowing is misdirected when focused on sources other than those involved in the give-and-take between the student and the forces surrounding the student. That is, knowing does not exist in the mind of a subject, possessed by an individual, nor does it come as a collection of facts or propositions. Knowing emerges from an intentional process of creating connections between actions and consequences, between the student's behavior and the effect of it on and within the environment.

Dewey considered that connections between doing, outcomes, and influences make up the essence of thinking, and acquisition of knowledge neither signifies the end of thinking nor the end of questioning the relationship between action and consequence. Although questioning may end for a number of reasons, including a student's boredom or frustration, Dewey made clear that the role of knowledge does not suppose certainty or fixed understanding:

> While all thinking results in knowledge, ultimately the value of knowledge is subordinate to its use in thinking. For we live not in a settled and finished world, but in one which is going on, and where our main task in prospective, and where retrospect—and all knowledge as distinct from thought is retrospect—is of value in the solidity, security, and fertility it affords our dealings with the future. (1944, p. 151)

In this passage, Dewey explained that knowing consists of the ability to productively guide thinking to resolve a situation, to take action effectively; that is, rather than espousing knowledge as the result of learning, Dewey argued that knowledge is used to create connections between consequence and action. For learners (e.g., advisees), knowledge informs the decision to take one course of action over another (e.g., selecting from a list of requisite classes), leads to the intentional reshaping of some aspect of concern (e.g., reframing a disappointing grade as an opportunity to improve), or helps resolve a problem (e.g., seeking an on-campus job to help with finances). Therefore, the only way to generate knowledge is to gauge the usefulness of an idea or informed hypothesis by acting on it, testing it, and applying it to current conditions to see if the expected outcome emerges.

Furthermore, Dewey (1916/1944) contended that knowledge is always tentative and conditional. Problems and issues arise out of the same continuous swirl of events and forces that constitute the whole of the environment; however, because of the particular nature of each problem and issue, a person must grapple with them as unique moments in time. Despite prior knowledge useful in attempts to understand a problem, the individual must test any thought and idea in the moment and in exact configuration of the environment that created the concern. Only an outcome in line with expectations provides the warrant for knowledge. Moreover, knowledge is only meaningful—reshaping some aspect of the environment is only worth doing—to the extent it sets the stage for further questioning, exploration, and experimentation. Dewey described thinking and inference as an "invasion of the unknown" (1944, p. 148).

Dewey's Naturalism Applied to Academic Planning

By applying Dewey's (1922, 1929b, 1919/1944) naturalism to academic planning, advisors add another dimension to counter the constructivist approach: responding within the environment. Under a naturalism perspective, one argues that students cannot stand apart from the swirl of activity around them nor use reason alone to acquire knowledge about the major. Systematically considering input about one's options—itself the result or consequence of seeking it—necessary to successful learning, the student must put new ideas, impressions, and understandings to the test and apply them to the existing conditions. That application requires the types of experimentation that accounts for the impact of classroom, campus, and community forces. To the extent the actions involved in the experiment lead to the intended set of conditions in this complex reality,

knowledge exists. To the extent the experiment leads to surprises or new questions, the cycle for seeking knowledge continues.

Using Dewey's process of knowing, the academic advisor does not dwell on the student's thinking or reasoning until the student reaches a stage of mastery about the major. Instead, the academic advisor must engender the process the student uses to resolve the problem of knowing (and later determining) a major. Generating an intelligent, considered idea for a major constitutes an important part of the process but does not terminate it. That idea must then be translated into course work, conversations with other students and advisors, and any other action deemed relevant to knowing. If those actions produce the conditions desired (e.g., more interesting or enjoyable time in the classroom, stimulating or exciting conversations, reassuring or inspiring grades), then a student can rightfully say, "I know my major." If those actions produce confusion, surprise, or tedium, the student does not declare a major but instead starts a new round of inquiry and thinking. Thus no right or wrong picture of a major emerges. No fixed answer resolves the question of choice for a major.

At this point in the treatise on knowing a major, Dewey might interject: "Nor can the student use reason alone to come to knowledge." By definition, reason does not include calculations for a constantly changing environment; rather, it is based on abstracted principles. From Dewey's perspective, reason proves insufficient for knowing because "we live not in a settled and finished world" (1944, p. 151), and therefore, abstracted concepts such as *the best major* are derived from the conditions that prevailed when the concept was generated. The initial conditions no longer prevail, either in part of in whole, so the reasoned concept can, at best, be partially useful.

Summary

Presented in unadorned fashion, the above analysis reveals the following:

- Whereas the constructivism of von Glasersfeld (1995) focuses on creating and judging cognitive objects by reference to universal standards of rationality, constructivists who espouse it must also embrace mind–body dualism.

- Dualism is antithetical to education because it strips students of any power to influence the environment in which lie their interests and concerns.
- Naturalism confounds dualism through a focus on the outcome of intentional action as the standard for knowledge.
- Knowledge is always tentative because the environment in which action takes place continuously changes.
- Seeking resolution to unresolved academic issues such as course planning and selection of a major within a constantly changing environment means students must experiment. To assert Dewey's critique of dualism applied to von Glasersfeld's constructivism in the context of academic advising, one must conclude that the proper focus of academic advising lies in facilitating student experimentation.

Discussion of the advising model(s) associated with this finding remains to be done.

In summary, I encourage academic advisors to guard against a temptation to extract students from the environment by turning their actions and ideas into mere symbols, mere objects of cognition to be judged against a universal standard. This admonition seems most appropriate because, at this time, the culture encourages students to expect and want that very treatment. Any experienced advisor recognizes the college students who want the advisor to give them a directive, to share the secret of successfully negotiating a typical situation. The impulse behind their request—uncertainty, ambiguity, and confusion—push them, and sometimes those advising them, to seek easy relief. However, a worthy college education includes healthy portions of all three types of stress, and acquiescing to the request to treat each student as a manifestation of some Everystudent means committing fundamental violence on the very student who made the request. Dewey would call such an advisor response "disempowering" because such a perfunctory, unconsidered response reduces the student from standing as an equal participant in the environment—a literal force of nature—to a mind trapped in a body without any direct access to the powers shaping her or his life.

Because psychological constructivism depends on knowing as independent from being, this kind of disempowerment may unintentionally appear in

the practice of those who adopt the constructivist perspective. Notwithstanding this concern, rigorous engagement with constructivism may help advisors tap into educational scholarship and recognize students as active in their own education. Dewey's work provides a useful course correction for constructivism that isolates activity to processes of reasoning alone.

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