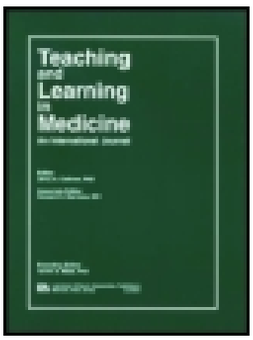

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OBSERVATIONS

Problems No One Looked For: Philosophical Expeditions into Medical Education

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ABSTRACT

Issue: Medical education has "muddy zones of practice," areas of complexity and uncertainty that frustrate the achievement of our intended educational outcomes. Slowing down to consider context and reflect on practice are now seen as essential to medical education as we are called upon to examine carefully what we are doing to care for learners and improve their performance, professionalism, and well-being. Philosophy can be seen as the fundamental approach to pausing at times of complexity and uncertainty to ask basic questions about seemingly obvious practices so that we can see (and do) things in new ways. *Evidence:* Philosophy and medical education have long been related; many of our basic concepts can be traced to philosophical ideas. Philosophy is a problem-creation approach, and its method is analysis; it is a constant process of shifting frames and turning into objects of analysis the lenses through which we see the world. However, philosophy is not about constant questioning for the sake of questioning. Progression in medical education practice involves recognizing when to switch from a philosophical to a practical perspective, and when to switch back. *Implications:* In medical education, a philosophical approach empowers us to "slow down when we should," thereby engaging us more directly with our subjects of study, revealing our assumptions, and helping us address vexing problems from a new angle. Doing philosophy involves thinking like a beginner, getting back to basics, and disrupting frames of reference. Being philosophical is about wonder and intense, childlike curiosity, human qualities we all share. Taking a philosophical approach to medical education need not be an unguided endeavor, but can be a dialog through which medical educators and philosophers learn together.

KEYWORDS
Philosophy; humanities; interdisciplinary

> "When a clinical presentation is atypical, a postoperative patient goes off course, an unusual reaction occurs from medication, or an anatomical anomaly is confronted, will the clinician… take heed and recognize the intricacies and complexities of the case… or will that clinician plow through, oblivious to its uniqueness and unaware of its consequences?"[1(p.S110)]

Analysis of physicians' expert judgment suggests that optimal performance and patient outcomes depend on physicians' ability to recognize "muddy zones of practice,"[2(p.1019)] and "slow down" to attend to the situation, reframe the problem at hand, and take action accordingly.[1] Among surgeons, signs of slowing down include turning off background music in the operating room, silencing chatter, and pausing to regroup.[2] Slowing down also may be proactively planned, prompted by the surgeon's anticipation of procedure- and patient-specific complexities and uncertainty.[2]

Medical education also has its muddy zones of practice, its own atypical presentations, unintended outcomes, and structural abnormalities for which to account. These areas of complexity and uncertainty likely feel familiar to many of us: they present as persistent challenges that frustrate the achievement of our intended educational outcomes, such as balancing learning and assessment or teaching and clinical service. Slowing down to consider context and reflect on practice are now seen as essential to medical education[3,4] as we are called upon to examine carefully what we are doing to care for learners and improve their performance, professionalism, and well-being.

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But what does "slowing down when we should"[1] look like in medical education?

Philosophy can be seen as the fundamental approach to pausing at times of complexity and uncertainty to ask basic questions about seemingly obvious practices so that we can see (and do) things in new ways. Whether we are aware of it or not, basic concepts we use in medical education can be traced to philosophy. For example, the idea that what we do – in medicine or in education – should be based on systematic empirical research whereby 'causes' and 'effects' are identified can be traced back to Hume and Locke.[5] Thinking about learners in terms of knowledge, skills, and attitudes can be traced back to Plato and Aristotle. Models of reflection, such as Kolb's,[6] can be traced back to John Dewey,[7] who in turn based his work on Hegel's philosophy. Slowing down with philosophy to reframe educational problems and take newly informed action may be seen as a kind of expedition – a journey of exploration with a particular purpose.

In this article, we illustrate a philosophical approach to slowing down in medical education, demonstrating how viewing a situation philosophically helps us pause to focus our attention, reframe the problem at hand, and take action accordingly. Next, we outline three philosophical practices that could be used to do philosophy in medical education. In this, we aim to support slowing down in the moment reactively to problems at hand. Finally, we describe what it means to be philosophical in our approach to teaching and learning and propose five themes as a starting point for dialog between philosophers and medical educators. These themes will be explored further in a series of articles published in *Teaching and Learning in Medicine* in the coming months. The aim of the series is to support proactive slowing down by identifying complexities and uncertainty in medical education that philosophers are wrestling with now.

A philosophical approach to the problem of resident teach back

Imagine an internal medicine residency program director faced with a problem: observation-based assessments reveal that before leaving the examination room, residents consistently fail to "teach back," or gauge their patients' understanding of their condition and what the next steps in their treatment plan will be.[8] Because teaching back has been shown to improve patients' health-related behaviors[9] and is seen by the residency program as an important demonstration of the internal medicine sub-competency "communicates effectively with patients and caregivers,"[10(p20)] the program director decides to intervene.

The intervention the program director chooses depends on how they have formulated problem at hand. Let us say that the intervention comprises dedicating a resident conference to the teach back method and administering a simulated patient encounter to formally develop teach back skills. In this case, the problem has been diagnosed as a knowledge gap: 'Trainees do not know how.' But imagine that the intervention is not successful, residents still do not teach back, and the program director re-formulates the problem as a motivational deficit: 'Trainees know how, but they are not motivated to do it; they do not understand why it is important.' To convince residents of the value of teach back, the program director then selects a meta-analysis documenting the positive outcomes of teach back to be discussed at the next internal medicine journal club.

In our example so far, the program director has seen residents' failure to enact satisfactory doctor-patient communication as a lack of requisite knowledge, skills, and attitudes. This seems obvious. But being philosophical is about questioning the obvious, so let us do that together here and see what happens: How does the *resident* experience the task of teaching back? Do they see a problem, and if so, how do they define it? The resident may be seen as entering the exam room embodying multiple, potentially conflicting roles: learner and practitioner. Their relationship to the patient and whether this is conducive to teach back may depend on how they navigate these roles. For instance, in order to teach back, the resident may need to feel ownership of the patient's care,[11] yet residents know they must verify what they do with the attending, who is ultimately responsible. Moreover, the attending is the more experienced practitioner, who may disagree with the resident's plan. In this context, teaching back, especially if the plan later needs correcting, may constitute a breach of role boundaries: acting like a practitioner when one is in fact a trainee. If the problem of teach back is one of role conflict, it calls for an intervention aimed at clarifying and navigating role boundaries; intervention aimed at knowledge or motivation would not work.

This way of approaching the problem differs from the previous one in that it disrupts the program director's frame of reference, a classic philosophical move. The resident is no longer approached as an assemblage of knowledge, skills, and attitudes, but as a thinking, acting being, which has implications for

what to do next. Instead of concluding 'We need an intervention,' the program director may step back and reimagine the problem, wondering 'Why don't residents teach back?' and, more generally, 'How can we help residents achieve high quality patient communication?' We already see numerous examples of this kind analysis in the medical education literature, which not only disrupt our assumptions about learners but also demonstrate that our community has a certain readiness to approach problems in medical education philosophically.

We now have three possible explanations for why a behavior expected of residents does not take place. Each of these explanations defines the problem in a certain way: as a communication knowledge/skill deficit, a motivational issue, and a role conflict. We may note that none of these definitions is necessarily truer than the other; after questioning the obvious and disentangling a problem from how it is viewed, philosophers are quick to disown the idea of finding the 'right' lens or framework, or to pretend that we can see the world 'as it is' without a lens or framework. The residents in our example may in fact need development of their teach back skills, but residents may not practice teach back because they are not motivated, and they may not be motivated because they seek to avoid role conflict.

(Some) new problems no one looked for

Let us imagine (perhaps readily) that despite identifying barriers to teach back and forming a response to address them, observational assessment of residents shows that their behavior still fails to meet expectations. Because medical education is interdisciplinary, the program director may recruit imported concepts and ways of thinking from medical science, cognitive psychology, educational science, and many other disciplines to solve this problem.[12–14] However, these different perspectives bring with them assumptions that might be incongruent with the aims of intervening or incompatible with each other. Raising philosophical questions about the interplay of power and knowledge, about the clash of learning and assessment priorities, even about the very nature of causality and progress may reveal buried and conflicting assumptions that underlie the recurrence of the teach back problem.

Through language, knowledge serves power

Perhaps our program director decides to examine resident-patient communication directly, approaching the project from the perspective of philosopher Michel Foucault (himself the son of a physician). A Foucauldian lens[15,16] would introduce two new perspectives on authority from which to view the problem at hand. The first perspective involves viewing authority in linguistic terms, as something that constrains who gets to say what and who can define key elements of the doctor-patient relationship, such as the diagnosis and the treatment plan. The second perspective involves viewing authority not as something one *has*, but something one *does*, and this depends on the kind of knowledge and information one can use. From this perspective we see the resident, patient, and attending as situated within a power-knowledge network;[15] knowledge is power enacted through what can be said and by whom.

Reconsidering our example now, the Shared Decision-Making framework,[17,18] of which teach back is one component, defines health care as a shared project of doctor and patient, but in the resident's situation the attending also participates. Examination of this group's communication may reveal that the attending physician is the one who leads the interaction when all three parties are in the room, defining how long the exchange lasts (e.g., by being the first person to say "goodbye") and what topics it covers (e.g., by being the one to ask questions). Viewing these interactions from the Foucauldian perspective may prompt the program director to shift the problem frame from 'How can we intervene to make residents teach back?' or 'Why does the resident not teach back?' to 'Why is it even a problem that residents, who lack power in this situation, do not teach back?'

Assessment or learning?

Taking a philosophical stance, the program director also may ask: 'Do we assess residents' teach back because it (1) ensures quality patient care; (2) facilitates the development of patient-communication competency; or (3) describes a resident behavior that we can evaluate readily with available instruments?' This question implies that it may not be enough for residents to *be* empathetic doctors,[19] or, in this case, effective communicators. They have to be *seen* as such, and this can only occur if they act in a way that is observable to the assessor. And even that is not enough; the assessor must translate their observations into the predefined structure of an assessment form.[20] In this, we see the competition between two discourses, that of doctor-patient communication (what

we want the resident to learn) and that of assessment (how we know the resident learned it).

The philosophical concept of 'instrumental thinking'[21,22] is relevant here. Philosophers have broadly distinguished two main ways of thinking: instrumental (or technical) rationality and value rationality. Instrumental rationality calls us to see the world in terms of ends that should be achieved as efficiently as possible. Value rationality, by contrast, calls us to relate to the world in a more holistic sense. These ways of thinking represent fundamentally different approaches of relating to the world, determining not just how we think but also how we feel and act. Our program director's question illustrates how instrumental thinking and value rationality may clash; teach back may reflect a more holistic notion of patient care, but its assessment may impose constraints on what constitutes teach back in order to evaluate trainees efficiently.

Recognizing this clash prompts the philosophical medical educator to slow down and analyze seemingly obvious practices and, buried beneath those, instrumental assumptions about skill and performance. We may discover that an assessment lens filters out resident practices that balance patient communication and skill development because they are not observable, measurable behaviors captured by assessment instruments.[23] Approaching teach back from a value rationality perspective may prompt the program director to ponder new questions: 'What is the ultimate purpose of teach back, and are there other practices that doctors in training can use to accomplish this goal?' 'Are our residents already doing these practices, but we fail to see it using our assessment instruments?'

Doing philosophy

There is a movement in medical education encouraging us to accept ambiguity as a part of becoming a doctor, rather than a sign that our training system is not working.[24,25] Modern philosophers like De Beauvoir have embraced ambiguity as a positive quality, potentially fundamental to human existence.[26] Perhaps tolerance for ambiguity is needed to become medical educators. Indeed, in medical education there is rarely a moment when we do not deal with ambiguity, and there is reason to suspect that one's ability to tolerate it is positively related to psychological well-being.[27] Hopefully, our illustration of viewing complexities and uncertainty in medical education philosophically has stimulated enthusiasm to slow down and wrestle with questions about why medical education is the way it is and, in so doing, see things anew and take productive action. Doing philosophy often involves engaging ambiguity by way of philosophical practices: points of entry for philosophizing helpfully about our educational efforts.

The first philosophical practice we suggest is to pay attention to what is happening and assume a beginner's mind, even if one is experienced. This is exemplified in the well-known saying (often misattributed to Socrates) "All I know is that I know nothing." Rather than achieving mastery, this first practice is aimed at the urge to "slow down" in the face of complexity or uncertainty, a hallmark of expertise.[1] In our example, when observational assessments continued to show, despite intervention, that residents were failing to teach back, the program director paused to question whether this was in fact attributable to knowledge, skill, or motivational deficits, and later, to question what made this 'problem' a problem in the first place. As another example, before asking the question 'How will we assess this new program?' this philosophical move—thinking like a beginner—gives us the space to ask 'Do we want to assess this program, and, if so – why?'[19]

A second philosophical practice is to lead a problem back to its most fundamental description, prompting assumptions to reveal themselves. If our program director kept seeing learners in terms of knowledge, skills, and attitudes, they would not have discovered the power dynamics in attending-resident relationships that might prevent residents from taking ownership of patient care. A guide in this practice is what Deleuze and Guattari call the first principle of philosophy: "Universals explain nothing, but must themselves be explained."[28] (p.6) If a reason for intervening is because it is 'good,' because it is 'evidence-based,' or because that is how students 'learn,' doing philosophy involves asking: What do you mean by 'good,' by 'evidence,' or by 'learning?' In this way, the most obvious and basic concepts we have in medical education can become objects of analysis in themselves. This philosophical practice—getting back to the basics—could also be enacted by asking: '*What question* can be formulated that involves *me*, the questioner?' For instance, the question 'How can I get my trainees to learn?' if asked philosophically could become: 'How do I see myself as an educator and what are the implications of my perspective for what learning is?'

The third practice, served by the preceding two, is to disrupt frames of reference. Viewing something from a different perspective—whether by imagining

what a problem looks like through someone else's eyes or by talking to someone with completely different sight—can reveal one's own assumptions or default lens. For example, in one of the Socratic Dialogs described by Plato, Socrates speaks with Euthypro, who is about to prosecute his father. Euthypro presents his case as obvious, but through a series of questions Socrates assumes an attitude of ignorance and invites Eurthypro, who claims "accurate knowledge of all such matters," to "teach" him.[29(p.6)] This disrupts Euthypro's frame of reference, forcing him to switch from a routine attitude in which values such as justice are taken as unproblematic to having to explain them. In our teach back example, it is the persistence of a problem that prompts the program director to take on different perspectives, to seek out residents' points of view, and finally to observe communication directly. Consequently, frames of reference were disrupted multiple times: from the resident as an object to a subject; from authority as something one has to something one does; and finally, from teach back as a problem the program director observes from a distance, to one that is shaped by their own views.

Being philosophical

> "The philosopher's treatment of a question is like the treatment of an illness."[30 (§255)]

Philosophy begins with the desire to understand something that is important to oneself, and with a dissatisfaction or even frustration with current ways of thinking. In this way, philosophy is an extension of those human qualities that are also at the root of scientific and technical advancement. However, philosophy remains close to questions, keeping them alive with intense, childlike curiosity and desire to understand. For example, in addressing a question such as 'What is good education?' a philosopher might invoke educational, psychological, neurological perspectives to consider instructional strategies, but then also go on to examine the terms 'good' and 'educational' from political, historical, linguistic, logical, and even spiritual perspectives. Philosophy can be seen as a form of inquiry that is not bound to any one lens or discipline. In this sense, it can act as a broker or negotiator between the different perspectives we have imported to medical education, leading us back to basic assumptions, providing common ground to think from rather than fueling debate between opposing views.

Plato's *Allegory of the Cave* illustrates how being liberated from the chains of our assumptions can be instrumental.[31] In this allegory, prisoners have been chained inside a cave for their entire lives, watching worldly forms dance on the cave wall. The prisoners do not realize that they are watching a projection, that they are seeing the shadows of objects being carried in front of a fire behind them. For them, the shadows are the objects. The prisoners learn that the world of shadows is an illusion only when they are released from their chains, turn around to discover the fire, and see the actual objects whose shadows they watched.[31] Being philosophical medical educators should prompt us to stand up, turn around, and see what objective we are trying to accomplish with education anew.

The aim of being philosophical is not to come up with 'a philosophy,' such as a theory or an ethical system to live by. If anything, philosophy is a problem-creation approach, and its method is analysis, a constant process of shifting frames and turning into objects of analysis the lenses through which we see the world. Being philosophical involves asking unanswerable questions and exploring ways in which one might go about answering them. The moment this process arrives at 'an answer,' the project becomes the charge of another discipline. For instance, the evidence-based medicine movement can be seen as a scientific answer to an epistemological question: What kind of knowledge can we rely on to guide our actions in patient care? Many thinkers have devoted their life to imagining how philosophy is a "pathway"[21(p.445)] for thinking, thinking that "does not come to a halt"[22(p.278)] in a theoretical or conceptual framework.

However, constant questioning also is a pitfall. We cannot constantly assume a philosophical attitude and be practical at the same time. As Nietzsche himself wrote: "I would die if I had to formulate the deepest reason for breathing before each breath I take."[32(p.21)] The challenge to a philosophical medical educator is to identify the point where progression necessitates applying incomplete, but compelling results of philosophical observation and analyses.

Moving forward

We offer here our undisguised hope that this article inspires more frequent philosophical analyses of the complexities and uncertainties that challenge medical education. Popular philosophy, such as the books by Alain de Botton[33] and *This is Water,* [34] and the podcasts Philosophize This![35] and the BBC's In Our Time: Philosophy,[36] provide accessible, yet rigorous entry points for exploration. These are, however, general and likely require collaboration with philosophers

to apply to medical education. For this reason, we aim to start a dialog between philosophers and medical educators via a series of articles that examine key areas in medical education using a philosophical approach. Five themes currently are planned for future discussion.

Perhaps the most fundamental theme connecting philosophy and medicine is mortality. The "questions intersecting life, death, and meaning, questions that all people face at some point, usually arise in a medical context."[37(p.70)] Moreover, mortality is the 'soil' in which medical education is grounded, for if we were not mortal, we would not need health care. Out of this ground rises the question: How can we support medical trainees in navigating professional/technical and empathetic/humane ways of thinking in medicine? Kalanithi eloquently expressed this dilemma with respect to cadaver dissection, writing that all of medicine "trespasses into sacred spheres. Doctors … see people at their most vulnerable, their most scared, their most private … Seeing the body as matter and mechanism is the flip side to easing the most profound human suffering. By the same token, the most profound human suffering becomes a mere pedagogical tool."[37(p.49)] How could philosophy help us help trainees (and their educators) maintain humanity in the face of existential questions and taboos?[38]

The second theme concerns the 'hierarchy of evidence' and the concept of 'best' evidence—the foundations of evidence-based medicine[39] and medical education[40]—which link epistemology and philosophy of science to standards of medical care. The evidence-based movement rests upon these epistemological assertions, these claims regarding the appropriate kinds and relative value of knowledge. Students and physicians aiming to practice evidence-based medicine are instructed to integrate 'best' evidence, based on scientific research, with clinical expertise in order to reach clinical decisions. Yet, these people are given no clear guidance regarding how such integration should occur. How would analyzing medical epistemology help us reimagine evidence-based practice?[41]

Language is a third theme connecting philosophers and medical educators. As educators know, talk and interaction may be the most important pedagogical tools at their disposal. But language is pervasive: the words we use shape our world. From the standpoint of linguistic philosophy, the single most beneficial insight that still has to land in medical education is that language in the workplace is usually for *doing* things, for achieving goals.[30] Recognizing this involves a shift from seeing language as a neutral framework for representing the world and communicating cognitions to a view of language as performative: a way of accomplishing social action.[42,43] What are the implications of this for educational practice?

The fourth theme is control and causality. A core assumption underlying medical education is that we can control attention, motivation, learning, development, and patient care through pedagogy. What exactly is the relationship between teaching and learning in medicine? Does teaching cause learning 'in the student,' in the way that a clinical intervention causes a somatic effect in the patient? Because medical education exists at the intersection of medicine and education, this may be an area in which unhelpful assumptions have been imported from medical science.[44,45]

The fifth theme is the relationship between mind and world. The way we conceptualize the relationship between physicality, neurology, and psychology has implications for how we see physicians' (and patients') relationship to patients' bodies and related matters, such as patient autonomy and shared decision making.[46] Mind-body dualism, associated with Descartes' philosophy,[47] permeates the medical approach to health issues. But often, patients might experience this in a more holistic way; medical interventions such as prosthetics or brain surgery not only affect patients' bodies, but also the way they relate to their bodies and to themselves.[46] Similarly, our thinking about learning and the curriculum in medical education is shaped by seeing learners as minds enclosed bodies, making artificial distinctions between mind/body, emotions/thoughts, language/actions, and so on.[48] Reexamining medicine's philosophical heritage in Cartesian Dualism may allow us to expand our understanding of what it means to *be* a doctor rather than just doing what a doctor does.[49]

Conclusion

Medical education has long had a relationship with philosophy. A philosophical approach can advance medical education today by helping us slow down in the face of complexities and uncertainty, see old problems in new ways, and take productive action. Doing philosophy involves thinking like a beginner, getting back to the basics, and disrupting frames of reference. Philosophy is not about creating 'a philosophy,' i.e., settling on a useful conceptual frame with which to organize the world. Rather, it is a "pathway" for thinking that "does not come to rest." Yet, philosophy in medical education is not meant to question constantly simply for the sake of questioning. Instead,

engaging with philosophy is meant to be helpful; it is about liberation from habitual ways of thinking and assumptions that underlie dissatisfying or even frustrating inability to progress. Ultimately, being philosophical is about wonder and intense, childlike curiosity, human qualities we all share. In identifying problems no one looked for, philosophy has empowered us for two and a half millennia to search ourselves.

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