Embodied Phronesis

Conceptualizing Materially Engaged Practical Wisdom in Teaching, Teacher Education, and Researech

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Abstract

This article offers "embodied *phronesis*" as a framework which counters the narrow conceptions of education central to neoliberalism. Beginning from the virtue of practical wisdom (*phronesis*) as discussed by Aristotle, I suggest that an intentional engagement with practical *and* value rationality is necessary to disrupt the technical logic of contemporary educational policy. However, I also extend applications of practical wisdom through considerations of embodiment found within both the "corporeal" and "new materialist" turns of social theory. These philosophical linkages offer a robust framework for guiding critically minded educators as they work toward socially engaged forms of education.

Keywords: *phronesis*, neoliberalism, embodiment, materialism

Introduction

This article incorporates multiple perspectives to offer embodied *phronesis* as a theoretical position that might reorient teachers, teacher educators, and educational researchers toward social justice efforts in the face of oppositional education policy. Aristotle's (2000) explanation of intellectual virtues, particularly that of *phronesis* discussed in book VI of the *Nicomachean Ethics*, serves as the primary theoretical framework for this argument. There, Aristotle defines *phronesis*, or practical wisdom, as an intellectual virtue "concerned with what is good and bad for a human being" (p. 107). He contrasts *phronesis* with the virtues

of *episteme* and *techne*, which are sometimes translated as "scientific knowledge" and "skill" respectively. *Episteme* is a state of reason that demonstrates universal principles which "cannot be otherwise" (p. 105), while *techne* is a state of reason concerning production toward "an end distinct from itself" (p. 107). In this way, the practical and value rationality of phronesis is distinct from the scientific and technical rationality of *episteme* and *techne*.

Many scholars have invoked Aristotelian *phronesis* as a way to recover practical wisdom from an instrumental rationality seen as the dominating force of contemporary life. Within philosophy, for example, Gadamer (1975) centered phronesis as a critical virtue in his development of philosophical hermeneutics. Similarly, Flyvbjerg (2001) has argued that *phronesis*, rather than *episteme* or *techne*, must be the guiding intellectual virtue for the social sciences. Additionally, numerous scholars have written about the potential application and revival of *phronesis* within professional disciplines generally (Kinsella & Pittman, 2012) and teaching specifically (Birmingham, 2004; Dunne, 1993; Noel, 1999). Taking inspiration from this scholarship, I will argue that *phronesis* runs counter to the ideological forces that currently dominate education and educational research, namely neoliberalism and neoconservatism. These will be defined more precisely in the following sections, but generally they emphasize top-down management of learning in the service of free-market, economic agendas as opposed to social, democratic ones.

Attention has also been paid to possible links between *phronesis* and embodied knowledge, with suggestions that practical wisdom may be an embodied practice (Kinsella, 2015). In this article, I will also attempt to update discussions of *phronesis* with considerations of embodiment as noted in the "corporeal turn" in professional practice and, more specifically, the new materialist turn within feminist social theory. Together, these theoretical frameworks challenge and disrupt the tenets of contemporary educational policy with its focus on top-down management and economic reform. Conversely, embodied *phronesis* positions education as a socially and morally contested space formed, not just by thought and word, but also by the bodies, places, and spaces of lived contexts. After examining the diverse theories that inform embodied *phronesis*, I suggest implications for putting this theory to work within teaching, teacher education, and educational research respectively.

Impact of Contemporary Education Reform

A brief account of the impact of contemporary educational reform is important to fully characterize *phronesis*, and later embodied *phronesis*,

as a framework that might allow for thinking differently in education. For the past few decades, numerous scholars have indicated that recent education policy has emphasized top-down managerialism to further a narrow economic agenda (Apple, 1986, 2006; Au, 2013; Barrett, 2009; Lipman, 2004; Kuntz, Gildersleeve, & Pasque, 2011). In particular, Apple (2006) argues that contemporary education policy has been shaped by what he calls "conservative modernization," informed by both neoconservatism and neoliberalism. *Neoconservatism* relies upon a strong state, calling upon the government to enforce the cultural order of society representing the Western tradition (Gildersleeve, Kuntz, Pasque, & Carducci, 2010). This top-down approach manifests in education in the form of accountability measures and standardization. *Neoliberalism* relies upon a weak state where social values are subsumed within free market principles to ensure the dominance of private enterprise and economic individualism (Gildersleeve, Kuntz, Pasque, & Carducci, 2010). Educational standards informed by an economic agenda, as well as school choice and privatization policies, such as vouchers and charter schools, are representative of neoliberal education reform. Apple (2006) explains, "Neoliberalism transforms our very idea of democracy, making it only an economic concept, not a political one" (p. 15).

Importantly, these do not represent a synthesis of left- and right-wing political movements, but rather are complementary ideologies working under the umbrella of conservative modernization to supplant socially valuable educational ends in favor of economic ones. Hursh (2007) explains that education is caught up in a modern phenomenon where "societal institutions are recast as markets rather than deliberatively democratic systems" (p. 493-494). This recasting of schools as markets, which are measured by their ability to contribute to economic production, has led to increasing accountability over schools and educators. For example, Leaton Gray (2007) suggests that modern school reform instills the notion of the "technicization of teaching," where teachers execute plans designed by managers. Au (2011) informs this concept by arguing that curriculum policies constitute a "New Taylorism," or a top-down managerial approach akin to the scientific management of the early 1900s.

The increasing bureaucratization of professions and public services has been labeled "new managerialism" (Clark & Newman, 1994, 1997; Deem & Brehony, 2005). Davies (2003) writes that new managerialism "is characterized by the removal of the locus of power from the knowledge of practising professionals to auditors, policy-makers and statisticians, none of whom need know anything about the profession in question" (p. 91). This seems to adequately describe the situation in public education

policy reform with its emphasis on top-down management, accountability measures, and quantification of performance. Interestingly, however, many note that managerialism is becoming increasingly prevalent in higher education as well (Baez, 2014; Giroux, 2002; Strhan, 2010). Thus, teacher education has been increasingly subject to accountability measures through the rise of performance assessment programs (Lewis & Young, 2013). In terms of educational research, models of cause and effect reasoning are prioritized as governing bodies become increasingly invested in a technical rationality of "what works" to produce pre-determined outcomes (Biesta, 2007). Within recent memory, this has had the impact of marginalizing research programs that emphasize context, social justice, and non-linear theories of education (Baez & Boyles, 2009; Lather, 2004; St. Pierre, 2002).

This account illustrates that current educational reform rests upon a technical rationality emphasizing decontextualized understandings of economic utility. Of importance in the public policy discussion on education is knowledge of the most efficient means to reach measurable outcomes such as higher test scores and the prevalent notion of college and career readiness. Such an emphasis has had the impact of deprofessionalizing teachers through increased managerialism, marginalizing socially responsible goals of education, and elevating simplified cause-effect models of education research. Clearly, then, teachers, teacher educators, and educational researchers committed to a social justice agenda require a framework that counters these dominant modes of educational policy.

Phronesis as a Counter-Framework

As stated previously, scholars in diverse fields have called for a revival of the ancient concept of *phronesis* to break from the narrow focus on scientific and technical rationality of modern times. According to Kinsella and Pitman (2012), *phronesis* "is generally defined as practical wisdom or knowledge of the proper ends of life" (p. 2). Thus, *phronesis* includes both practical rationality related to the particulars of lived contexts and value rationality of "what is good and bad for human beings" (Aristotle, 2000, p. 107). In this section, I first offer a brief overview of Aristotle's account of intellectual virtues before discussing how the concept of *phronesis* has been engaged in scholarly discourse on education and the social sciences. I conclude that *phronesis* offers a framework that challenges dominant technical understandings of education, and that opens up space for further development related to material forms of knowing and being.

Aristotle (2000) focuses on the distinct intellectual states that allow one to arrive at truth in book VI of the *Nicomachean Ethics*. The first state that Aristotle discusses is *episteme*, or scientific knowledge. This is a form of rationality concerned with laws and universal rules that can be demonstrated from eternal principles. He writes that it is a state of reason by which humans can demonstrate the truth from what "cannot be otherwise" (p. 105). Aristotle then discusses techne, or skill, as a form of knowledge "concerned with what can be otherwise" (p. 107). *Techne* represents craft knowledge on the part of a practitioner dealing with the means to reach a desired end. Finally, Aristotle arrives at *phronesis*, describing the possessor of practical wisdom as one who can see "what is good for themselves and what is good for people in general" (p. 108). Importantly, *phronesis* is distinguished from *techne* because practical wisdom involves deliberation on *praxis*, or right action, while skill only deliberates on *poiesis*, or production toward an already given end. Aristotle writes, "For while production (*poiesis*) has an end distinct from itself, this could not be so with action (*praxis*), since the end here is acting well itself" (p. 107).

It might be argued that current thought within the educational landscape operates according to the logics of *episteme* and *techne*. As discussed previously, recent school reforms have reduced educational practice to a technical rationality of prescriptive procedure and elevated "scientific" research on education that emphasizes cause-effect models. Zeichner (2010) even contends that teacher education has for too long operated according to an applied sciences model where pre-service teachers are expected to learn theories of teaching and learning (*episteme*) at the university and then apply them in practice (*techne*) in the classroom. Many scholars have long argued that education need not be thought of in such technical or scientifically reductive ways. For example, Schön (1983; 1987) emphasized the need for reflective practice among educators, while van Manen (1994) and Eisner (2002) both offered the notion of teaching as a virtuous practice. Similarly, Ross (2006) has suggested that teachers must engage in a deliberation of educational values or "the perennial curriculum question—what knowledge is of most worth?" (p. 5). The principles put forward by these authors speak to the central features of *phronesis* as a deliberation of values, or what is good and bad for human beings. Thus, many have returned to *phronesis* as a guiding rationality for educational practice (Amobi, 2006; Birmingham, 2004; Field & Latta, 2001; Halverson, 2004; Melville, Campbell, Fazio, & Bartley, 2012; Phelan, 2005). In particular, Dunne (1993) argues that emphasis on technical and scientific rationality does not align with the day-to-day practical wisdom used by successful classroom teachers.

Discussions of social science inquiry have also revived *phronesis* as a guiding framework. Thomas (2010), for example, states that research into the social world should focus on abduction, or "conclusions drawn from everyday generalization" that are "unpretentious in their assumptions of fallibility and provisionality" (p. 577). He suggests that this emphasizes exemplary knowledge, rather than the decontextualized knowledge of epistemic rationality, which speaks to understanding in particular situations that is at the heart of *phronesis*. On a broader scale, Flyvbjerg (2001) argues that the low status of the social sciences within the academy is due to a vain attempt to emulate the predictive and explanatory qualities of the natural sciences. He contends that the social sciences should rather tap into the practical and value rationality of *phronesis* to reconceptualize social inquiry as a form of moral and ethical discourse that focuses on contexts, practices, and issues of power within them. Flyvbjerg writes, "the goal of phronetic research is to produce input to the ongoing social dialogue and praxis in a society, rather than to generate ultimate, unequivocally verified knowledge" (p. 139).

Based on these considerations, *phronesis* offers a framework for conceptualizing social justice efforts that counter dominant narratives of education informed by neoliberal/neoconservative agendas. *Phronesis* requires educators to consider the practical wisdom involved in engaging the complexity of lived contexts in which teaching and learning occur, rather than simply rely on decontextualized notions of scientific rationality such as "data-driven decision making" (Mandinach & Gummer, 2013). Additionally, *phronesis* counters the technical rationality underlying practices such as narrowing curricula to meet pre-specified learning objectives (Au, 2007; Milner, 2013) by reinstituting value rationality that might ask: what knowledge is of most worth? A phronetic social science (Flyvbjerg, 2001) would also turn educational inquiry toward an engagement with multi-faceted practices and contexts for the purpose of contributing to a social dialogue about values.

There is, however, room for development within the framework of *phronesis* and its emphasis on lived practices and contexts. For example, Aristotle (2000) and the many modern-day scholars who engage his work emphasize the dialectic aspects of *phronesis*, such as dialogue and deliberative judgment, but pay little attention to the materiality or embodiment of practical wisdom. In the next section, I will discuss what some have termed the 'corporeal turn' in theorizing professional practice. This section will argue that embodiment, or the felt engagement of bodies in relation to material spaces, should be a central concern for thinking through 'phronetic' understandings of practice.

The Corporeal Turn and Embodied Phronesis

Scholars of professional knowledge and practice have paid important attention to *phronesis* within recent years, specifically due to concerns regarding the increasing technicism of our current moment. For example, Kinsella and Pitman (2012) question whether Aristotelian practical wisdom might offer a corrective to the loss of value-rationality within the professions that have been overtaken by technical rationality. They ask, "If we take *phronesis* seriously as an organising framework for professional knowledge, what are the implications for professional education and practice?" (p. 1). I would offer that one of the implications of taking *phronesis* seriously within the context of education is that the practice of teaching must be considered an embodied act and, thus, the role of the body and its link to the broader social-material world must be considered more extensively. This follows from Kinsella's (2015) suggestion that the enactment of *phronesis* is an embodied phenomenon and that the relationship of embodiment to *phronesis* requires fuller attention among scholars.

An understanding of what some have termed the corporeal turn in social theory and professional knowledge helps illustrate important connections between embodiment and *phronesis*. First, it is important to note that considerations of the embodied nature of professional knowledge and practice is relatively recent. Green and Hopwood (2015) explain that, while many traditions within philosophy and social theory have considered embodiment, accounts of the professional self as an embodied subject are few. In discussing the importance of theorizing embodiment for professional knowledge, these authors write that embodied perspectives "reconstitute the notion of the professional subject in profoundly different ways, questioning and challenging dualisms between mind and body, self and other, human and non-human, space and time, flesh and image" (p. 4). Along these lines, I would like to consider how thinking through embodiment within the professional field might extend to phronetic understandings of teaching and offer alternatives to the technical rationality characteristic of neoliberal reform.

One of the ways in which the corporeal turn helps to reimagine the professional subject, and by extension the professional educator, is that it makes clear that teaching is enacted by bodies contextualized within material spaces. This may seem an obvious point, but scholars of embodiment suggest that technical rationality that is prevalent within the professional world positions teaching as an essentially disembodied practice. The emphasis on high-stakes testing outcomes, achieving measurable curriculum standards at ever-increasing pace, "teacher-proofed"

curricula and pacing guides, and more narrowly defined teacher evaluation tools, to name but a few examples, treat teaching and learning in a vacuum. Little consideration is given to the context of classrooms at all, much less how teachers' and students' bodies are emplaced within the material space of schools and classrooms, what impact this has on the learning experience, or what values are exposed in the educational system when there are unequal distributions of bodies and spaces (e.g. overcrowded classrooms in under-funded districts). Firstly, then, the corporeal turn in professional practice helps reconstitute teaching as an embodied act that cannot be reduced to the decontextualized manifestations of technical rationality.

Going further, however, the corporeal turn suggests that the body must not be understood as static. If we take embodiment seriously within understandings of professional knowledge and teaching, we must understand its indeterminacy and multiplicity. For example, Grosz (1994) explains that the work of Deleuze and Guattari provide an understanding of the body that is "a myriad of intensities and flows" that is "excessive to hierarchical control" and that is "the site or sites of multiple struggles, ambiguously positioned in the reproduction of social habits, requirements, and regulations and in all sorts of production of unexpected and unpredictable linkages" (p. 181). Working from this scholarship on the body, Green (2015) explains that this understanding of embodiment is not about "what a body *is*, or how it might be defined, and known—but a momentum, a trajectory, a process…" (p. 126). The corporeal turn reorients educators to see the productive capabilities of bodies and how they resist order, determinacy, and control as they interact with the material world.

I argue that considerations of the body as a site for deepening understandings of professional knowledge found within the corporeal turn connect with, but also extend, the framework of *phronesis*. First, the emphasis on the body emphasizes the contextual knowledge that is at the heart of practical living. In other words, *phronesis* is a practical rationality concerned with the actual doing of things within the embodied nature of lived experience. In his discussion of the body, Green (2015) links this kind of rationality to non-representational theory. Quoting Thrift (1999), he describes this as "a style of thinking and a form of theorising which is 'a practical means of going on rather than something concerned with enabling us to see, contemplatively, the supposedly true nature of what something is'" (as cited in Green, 2015, p. 124). Turning attention to the productive capacities of the body, then, is not an epistemic consideration of scientific principles, but a practical rationality concerned with the realities of lived contexts. Second, schol-

ars of the corporeal turn emphasize the indeterminacy and multiplicity that is characteristic of embodiment. I believe this connects with the indeterminate nature of *phronesis* as a form of rationality concerned with "what can be otherwise" (Aristotle, 2000, p. 107), or that which is done outside of the causally determined laws of nature or the mechanical practices of technical rationality. Professionals are those who "feel" their way through the indeterminate contexts of real life as they experience them as embodied individuals. This works back against the assumptions of neoliberal education reform which positions teachers as disembodied technicians, simply employing efficient mechanisms without regard for contextual or embodied circumstances.

The corporeal turn within theory on professional knowledge and practice thus provides an important link to the overall framework of *phronesis*, while also providing an important extension to the body as a site for understanding the practical wisdom of professionals and educators. Having said that, I also believe this scholarship often focuses on the practical dynamics of the body and sometimes misses the value rationality central to such a reconsideration, or what Green and Hopwood (2015) call the "politics of (dis)embodied discourses" (p. 4). Additionally, the focus on the human body within this scholarship sometimes misses the ways in which embodied practices are entangled within material space, or "the socio-materiality of the extra-human world" (Green, 2015, p. 124). As such, I next turn to the recent work of feminist scholars within "new materialism" to supplement these important considerations as I believe this work offers a more comprehensive account of materiality while pointing directly to the value rationality which lay at the heart of *phronesis*.

New Materialism for Embodied Phronesis

Though there are other traditions that emphasize the body and materiality as sites of knowledge, such as phenomenology and social studies of science, I specifically draw upon feminist scholarship within new materialism to further develop *phronesis* because of its expansive view of materiality, including the untangling of traditionally held dichotomies such as subject-object, human-nonhuman, and nature-culture (Alaimo & Hekman, 2008). This scholarship insists on not only the body as a site of knowledge generation, but also how the agency of material spaces works upon human bodies for new epistemological, ontological, and ethical formations. Thus, I hold an expansive understanding of embodiment within "embodied *phronesis*," which includes the body and how it forms, and is formed, by material spaces in lived contexts. In

my view, the fluid state of knowledge and reality underlying feminist materialism, with its emphasis on felt spaces, links with the contextual determinacy at the heart of *phronesis*.

Feminist materialism is perhaps best situated within the larger framework of "new materialism," an emergent domain of scholarship influencing multiple and disparate disciplines, which "dissolves boundaries between the natural and the cultural, mind and matter" (Fox & Aldred, 2015, p. 400). According to Dolphijn and van der Tuin (2012), publications engaging new materialism have been growing since the late 1990s, especially in cultural and feminist theory. The work of Karen Barad (2003; 2007), and her framework of agential realism, is prominent within the discussions of material feminists. In particular, however, I want to focus on Barad's assertion that social inquiry, from both realist and social constructionist perspectives, privileges representational understandings through the elevation of language. She writes, "Language has been granted too much power…it seems that at every turn lately every 'thing'…is turned into a matter of language or some other form of cultural representation" (p. 801). This has had the impact of marginalizing the importance of material agency. Drawing on Rouse (1996), she posits linguistic dominance as a Cartesian by-product of the division between the "internal" and "external," noting that "the asymmetrical faith in our access to representations over things is a contingent fact of history and not a logical necessity" (p. 806).

To this point, material feminists seek to challenge historically entrenched dichotomies to emphasize the importance of the physical world, including the dynamic interplay between human bodies and the materiality of the natural world, in ontological, epistemological, and ethical formations. For example, Tuana (2008) suggests that the example of Hurricane Katrina indicates a *viscous porosity* between nature and culture, where "no sharp ontological divide" (p. 193) exists between the human and non-human due to the complex interaction between these phenomena. Human activities, such as fossil fuel combustion and deforestation, contributing to climate change have the impact of producing "natural" entities, such as destructive weather patterns, which in turn work back upon lived contexts; in this example, the places and spaces of marginalized neighborhoods, and the bodies that occupied them, which felt the brunt of Katrina's devastation. For Tuana, reconsideration of unnecessary distinctions between nature and culture and mind and materiality are central to, not only epistemic, but also ethical analysis. She writes:

> we cannot separate epistemic analysis from ethical analysis. To know well, we must be responsive to the differences articulating themselves

> in our experiences and practices, along with being attentive to how the distinctions we embrace, in part, construct our experiences, as well as how these distinctions are enacted in social practices, how they enable as well as limit possibilities and for whom, what they conceal as well as what they reveal, and so on. (p. 192)

Such considerations exemplify the character of an embodied *phronesis* as they accentuate the necessity of material engagement within deliberations of "what is good and bad for human beings" (Aristotle, 2000, p. 107).

A growing body of literature is engaging the implications of the materialist turn within educational research and theory. For example, Lather and St. Pierre (2013) question what new possibilities might emerge within educational inquiry if we take on the assumptions of new materialism and post-humanism. In particular, St. Pierre (2013) works from Deleuze to call for a more experimental ontology of *becoming* that opens new possibilities in its break from linear representational logics (p. 652). Importantly, the ontological turn underlying new materialist engagement is closely linked to the ethical commitments that are at the heart of *phronesis*. Speaking of new materialist work, St. Pierre writes:

> Scholars introducing this work are mobilizing and extending "post" ontological critiques that insist we rethink the nature of being. Importantly, *this is an ethical charge*. In this ontology, *thinking and living are simultaneities*, and we have to think possible worlds in which we might live. (p. 654-655)

This unification of thinking and living in worlds that are in the making hint of Aristotle's (2000) notions of what "can be otherwise" (p. 107) within the ethically situated rationality of *phronesis*.

This review of some of the important tenets of feminist materialism, and the broader implications of new materialism, illustrates the central place of materiality. It is crucial for those concerned with the technical rationality of contemporary education to emphasize the ways that bodies, places, and spaces both act upon and are acted upon by the material world. As Tuana (2008) notes, failure to recognize material interaction has a very real social and ethical impact. As noted earlier when discussing the corporeal turn, this is exemplified within education when social inequalities are exacerbated by technical models of teaching and learning which fail to account for the materiality of lived spaces, such as underfunded neighborhoods and dilapidated school facilities. Joining with Flyvbjerg (2001), educators committed to social justice must break from technical rationality by asking value rational questions that contribute to social dialogue and praxis. This phronetic stance can be further developed, however, through a shift toward material engage-

ments; an embodied *phronesis* that takes seriously the impact of the material to ethical discourse.

Implications of Embodied Phronesis

Interestingly, several authors have noted the connections between the continental philosophy underlying both the corporeal turn and new materialist work, especially that of Deleuze, and the philosophy of classical pragmatists, such as Dewey (Hickman, 2007; Rosiek, 2013; Semetsky, 2003). Picking up on this connection, I put two reflections on the role of theory side by side in order to introduce a concluding discussion of how embodied *phronesis* might be put to work in education. The first is from Dewey (1929) who writes, "Theory is…the most practical of all things, because this widening of the range of attention beyond nearby purpose and desire eventually results in the creation of wider and farther-reaching purposes" (p. 17). The second is from Barad (2012) who writes:

> Doing theory requires being open to the world's aliveness, allowing oneself to be lured by curiosity, surprise, and wonder. Theories are not mere metaphysical pronouncements on the world from some presumed position of exteriority. Theories are living and breathing reconfigurings of the world. (p. 207)

Each of these perspectives speaks to theory as a form of practical engagement *in* the world, not outside of it. This is not theory in the epistemic or deductive sense, but is rather a shifting or opening up of one's perspective that allows for new realities and new possibilities. A theoretical framework of embodied *phronesis*, with its emphasis on the practical, the ethical, *and* the material, has the power to productively counter technical rationality within the educational landscape. It reconfigures the world by pointing to wider and farther-reaching purposes that are not possible in dominant narratives of education. In this section, I suggest implications that a framework of embodied *phronesis* might have for education in the areas of teaching, teacher education, and educational research respectively.

The first implication of embodied *phronesis* is that it reframes the practice of teaching as an ethically engaged act rather than a technical procedure. Current narratives in education situate the teacher as a nearly amoral agent, simply tasked with efficiently managing the means to reach an already determined outcome. When ethical considerations do enter the dialogue, they are often confined to professional codes of conduct and, perhaps, an ancillary role for developing personal relationships with students separate from the pedagogical or curricular aspects of teaching. In other words, teachers' craft is reduced to reflect-

ing only on the means—on how to teach rather than on what and for what purpose. But dialogue over what is best to teach and the larger ethical dimensions of the purposes of teaching is central to any educator concerned with social justice efforts or pedagogical responsibility. As van Manen (1991) writes, "the essence of education is less a technical or production enterprise than a normative activity that constantly expects the educator to act in a right, good, or appropriate manner" (p. 9). The constitution of teaching as only a technical enterprise is exactly what prevailing policies in education do. As bell hooks (1994) argues, the erasure of the material, specifically that of the body in traditional education, contributes to the perceived neutrality of teaching implicit within prevailing policy reforms. She says, "The erasure of the body encourages us to think that we are listening to neutral, objective facts, facts that are not particular to who is sharing the information" (p. 139). Importantly, however, dialogue that incorporates the body has the effect of challenging these normative structures. She continues, "Once we start talking in the classroom about the body and about how we live in our bodies, we're automatically challenging the way power has orchestrated itself in particular institutionalized spaces" (p. 137). Thus, a theoretical framework of embodied *phronesis* "works" to disrupt the dominant frame of the teacher as technician and reorient teachers toward a more ethically and materially engaged conceptualization of the profession.

The second implication of embodied *phronesis* is that teacher education must take seriously the notions of knowledge developed from material engagement and the cultivation of practical wisdom. Berliner (1994) illustrates, for example, that expert teachers do not actually follow the neat, linear models of teaching and learning so desired by the wider policy community. They rather act in an intuitive and fluid manner that is in a sense arational "because it is not easily described as deductive or analytic behavior" (p. 77). This follows from Dreyfus's (1986) model of expertise, which emphasizes the intuitive nature of embodied human practice over the technical aspects of the information-processing model of the mind. If it is true that experts, including expert teachers, develop expertise through a process of engagement with the concreteness of material practices, rather than from better and better rule application, this should position teacher education differently. Rather than simply instilling instrumental procedures, teacher educators must also make attempts to cultivate practical wisdom that comes about from reflective practice or pedagogical thoughtfulness (Schön, 1983; van Manen, 1994). Such an emphasis on practical judgment illustrates the critical necessity of contextual deliberation in preparing educators. While it may seem that these ideals would be better suited

for socially applied content areas like social studies, the importance of developing contextual decision-making has been explored broadly. For example, researchers have indicated the importance of context in relation to educational leadership perspectives in addition to that of classroom teaching (Gummerson, 2015; Halverson, 2004).

The cultivation of practical wisdom has an ethical dimension as well. Carr and Skinner (2008), for example, suggest that professional teacher education incorporate a broader view of teacher expertise that moves away from the overly technical. They write, "On this view, good teachers need not only to be effective followers of rules or possessors of skills, but also certain kinds of *persons*" (p. 150). They continue, "Thus…in addition to cultivating instrumental skills of organization and management, good teachers will be those who are motivated towards the cultivation of qualities of moral character" (p. 153). A framework of embodied *phronesis* shifts the primary emphasis of teacher education away from linear models of technical preparation and toward the cultivation of a deeper sense of practical and value rationality.

Lastly, embodied *phronesis* has important implications for educational research. I have tried to argue that education must be understood as an ethically *and* materially situated experience. Thus, researchers might follow Flyvbjerg's (2001) call for a phronetic social science, seeing the purpose of educational inquiry as more about in-depth analyses of particular contexts for input into an ongoing moral discourse rather than deducing causal laws for an increasingly precise management of education. The goal for researchers might be to develop new forms of knowledge, new ways of understanding, and new ways of being and becoming for educational possibilities that are always in the making. To do this, educational researchers must develop methods that engage materiality by emphasizing the importance of the body, place, and space. Forward thinking research methodologists are contributing to these new forms of practice already (Anderson, 2004; Jackson, 2013). Researchers committed to social justice goals must also reflect back upon how materiality informs social and ethical dialogue. Massey (2008) provides an example of this kind of inquiry when she writes of engaging space, "We need to ask…whether our relative mobility and power over mobility and communication entrenches the spatial imprisonment of other groups" (p. 260). Inquiry of this kind negotiates and intertwines the interaction between material and ethical analysis. It points to the very real ways that the bodies, places, and spaces of schools perpetuate or challenge existing patterns of inequality and domination. This research, which seeks to intentionally intervene in social and cultural formations, cannot be developed through traditional understandings of method or of

the distant, disengaged researcher. It requires an ethical and material commitment that constitutes a methodological responsibility for the critically-minded educational researcher (Kuntz, 2015). As with teaching and teacher education, a framework of embodied *phronesis* transitions the theory and practice of educational research toward materially informed social justice efforts that counter the technical logic implicit in current educational policy.

Conclusion

The technical rationality underlying modern school reform is pervasive and likely to continue within entrenched neoliberal and neoconservative policymaking. Thus, new theoretical perspectives are needed that allow educators to think otherwise, opening up possibilities that are not available within dominant paradigms. In this article, I have offered embodied *phronesis* as an eclectic perspective that counters linear, cause-effect models which remain prevalent in educational discourse. I suggested that the merging of the material engagement found within both the corporeal turn and new materialist frameworks with the practical and ethical commitments at the core of *phronesis* presents a particularly non-linear theory of education that is attuned to lived contexts and issues of social justice. Finally, I discussed the implications of putting such a theory to work within the domains of teaching, teacher education, and educational research. Within each of these domains, embodied *phronesis* would "open up" rather than close down, pointing educators to new knowledge and new processes of becoming as they strive toward "what can be otherwise" (Aristotle, 2000, p. 107) in a more socially just world.

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