Phronesis and the Good in Teacher Education

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Introduction

Over the last ten years, the Jubilee Centre has offered regular opportunities for scholars in philosophy, theology, psychology and education (among others) to share their research on moral education. It is our opinion that this work has been instrumental in fostering collaboration between these fields, which can sometimes exhibit indifference or even opposition towards each other's methodologies and results. Indeed, we believe that the collaborative environment of the Jubilee conferences has yielded an important insight into the nature of meaningful interdisciplinary research: namely, the central role of *phronesis* in the social sciences and humanities. An orientation to *phronesis* invites interdisciplinary cooperation by reminding us of the importance of diverse disciplinary perspectives for capturing the elements of practice that evade precise analytical reconstruction. Moreover, because of its role in ethical action, *phronesis* also encourages scholars and researchers to maintain a firm connection between their research and meaningful social and personal progress (Flyvbjerg, 2001). Scholarship on moral education is a clear example of the double value of *phronesis* in research, as scholars of moral education are not only engaged in the interdisciplinary endeavor of finding out what good moral education is, but are also often tasked with training the moral educators of the future.

The role and meaning of *phronesis* specifically in teacher education is the concern of the present paper. Teacher education programs typically aim to equip aspiring teachers with a comprehensive set of knowledge and skills which will help them to create effective learning environments in their future classrooms. Lee Shulman (1987) famously argues that effective teachers exhibit knowledge in no less than seven different areas, including knowledge of the subject matter, curriculum, context of learning, and general pedagogical methods, as well as how to present complex disciplinary content in an accessible and attractive way for learners. Since the publication of Schulman's catalogue, a vast discussion has ensued in the educational research community concerning the competencies, skills, and methods that teachers require to create these kinds of environments (Raduan & Na, 2020). Recent models of teacher expertise often draw heavily on Shulman's study, but they have also worked out several further domains of teacher knowledge that are necessary for effective teaching.[1] For example, Blömeke et al. (2016) add to Shulman's model skills necessary for diagnosing students' errors in the classroom context, as well as the on-the-fly ability to "perceive, interpret and make decisions about . . . instruction" (p. 37). The addition of diagnostic and specifically instructional domains of knowledge constitutes an important advance in our understanding of teachers' cognitive processes, as they capture yet further skills teachers need to effectively conduct and assess student learning in the classroom (Blömeke, Kaiser & Lehmann, 2010; Döhrmann, Kaiser, & Blömeke, 2012; Kersting, 2008; Krauss & Brunner, 2011).

Despite increasing sophistication in our understanding of teacher cognition, a growing number of teacher education researchers have argued that many of the current models of teacher expertise are missing an essential element. Advocates of the Aristotelian-inspired idea of *phronesis* maintain that the special forms of knowledge, reasoning and judgment that *phronesis* encompasses is indispensable for understanding teacher expertise (Pickup, 2020; Florian & Graham, 2014; Ellett,

[1] There is also a vast debate on how to characterize the skillfulness of teachers at a conceptual level. While some use the term "expertise," others have advocated for "competency" and other terms.

2012; Hibbert, 2012; Kinsella & Pittman, 2012; Phelan, 2009; Hansen, 2007; Amobi, 2006; Birmingham, 2004; Halverson, 2004; Eisner, 2001; Kessels and Korthagen, 1996).[2] According to these researchers, *phronesis* is an intellectual capacity or "virtue" that allows expert teachers' to make reasoned and value-oriented judgements in complex situations that do not have a "correct" answer based on pre-established principles, rules or procedures. As Kessels and Korthagen (1996) put it in their seminal article in *Educational Researcher*:

> To choose and justify a particular course of action (either for the student teacher in his classes or for the teacher educator in the supervision of the student teacher), the ultimate appeal of phronesis is not to principles, rules, theorems, or any conceptual knowledge. Ultimately the appeal is to perception. For to be able to choose a form of behavior appropriate for the situation, one must above all be able to perceive and discriminate the relevant details. . . . This faculty of judgment and discrimination is concerned with the perception or apprehension of concrete particulars, rather than of principles or universals. (p. 19)

Because *phronesis* assists the educator in grappling with the particularities of the teaching environment, it is akin to the instructional domain of knowledge discussed by Blömeke et al. At the same time, it differs from this domain in its synthesis of various other forms of reasoning in an embodied form of knowledge and intellectual capacity that reflective expert practitioners are supposed to possess. As commentators have pointed out, Aristotle suggests that *phronesis* involves a number of intellectual qualities, like intelligence (*nous*), good judgement (*sunesis*, VI 10), discernment (*gnome*), and deliberative excellence (*euboulia*, VI 9) (Russell, 2014, p. 206). All of these things combined gives *phronesis* "right reason" (*orthos logos*), which consistently leads the individual to virtuous or excellent action (*arete*).[3] In combining these elements together in complex ways, *phronesis* performs four core psychological functions for the individual. Synthesizing the expansive research literature on *phronesis*, Kristjánsson, Fowers, Darnell and Pollard (2021) show that *phronesis* characteristically allows practitioners to (1) "perceive the ethically salient aspects of a situation" (constitutive function), (2) "engage in the adjudication of moral matters when conflicting desiderata arise" (integrative function), (3) make progress towards realizing their "ethical identity, aims, and aspirations, [as well as] their understanding of what it takes to live and act well" (blueprint function), and (4) "adjust their appraisal and emotion[al]" response to the situation at hand (emotional regulative function) (pp. 246-247).

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[2] There has also been several articles challenging some underlying assumptions of these advocates of *phronesis*. See Kristjánsson (2005) and Burbules (2019).

[3] All quotations from Aristotle will come from *The Complete Works of Aristotle* (1984), edited by Jonathan Barnes. Barnes uses the *Revised Oxford Translation* of Aristotle's texts and that translation often uses the word "excellence" as a translation of *arete*, instead of the more traditional "virtue." Because the concept of virtue will be central to this paper, we will replace the word "excellence" with the word "virtue" in each passage we quote from. Furthermore, the *Revised Oxford Translation* typically uses the words "practical wisdom" as a translation for *phronesis*. Since this paper is on the concept of *phronesis*, and since *phronesis* has made its way into the general philosophical vernacular, we will use the word "*phronesis"* in our quotations from Aristotle rather than "practical wisdom." We reference exclusively from the *Nicomachean Ethics* in this paper, which we will abbreviate in references with NE and include line rather than page numbers, as is standard in Aristotle scholarship.

Advocates of *phronesis* claim that efforts to cultivate this kind of capacity are utterly lacking in most teacher education programs. By and large, teacher education programs focus on the transmission of knowledge won by means of scientific inquiry and empirical research—whether concerning teaching methods, the psychology of learning and growth, school law or other aspects of the educational environment—rather than the cultivation of tacit and embodied practical knowledge. Although teacher education programs typically have multiple practical phases in which preservice teachers work directly with students, they are conducted without the robust educational apparatus that the development of *phronesis* requires (Korthagen & Kessels, 1999). For teachers to be really equipped with "best practices," advocates of *phronesis* argue that the practical phases of teacher education need, at the very least, to be undergirded by much more guided reflection than already occurs, and more opportunities for mentor-mentee apprenticeship.

Although we believe that the above researchers are correct to see *phronesis* as essential to effective teaching, many of the prior attempts to describe a "phronetic" approach to teacher education have mis-characterised what *phronesis* is, why it is important for teacher education, and how to cultivate it. *Phronesis* is indeed a powerful intellectual capacity that is essential if teachers are to be able to respond to an enormous variety of unpredictable circumstances in the classroom, but it also has a normative component which makes it equally essential in helping teachers draw students to appreciate the ethical and aesthetic dimensions of their engagement with subject matter. When the ethical and aesthetic dimensions of subject matter are addressed in tandem with the epistemic counterpart, psychological research has shown that students' experiences become much more subjectively valued and academically meaningful for them (e.g. Pugh, 2020, 2011, 2002). The problem is that attaining both the intellectual and normative components that make up *phronesis* is, according to Aristotle, impossible to achieve in short periods of time. *Phronesis* is the culminating intellectual virtue that is acquired through a decades-long process of moral habituation, through which individuals acquire the depth of moral and aesthetic vision to consistently realize the good in their actions (Aristotle, 1984, NE 1142a). Aristotle argues that if people have not been habituated correctly, the intellectual virtue they will develop is not practical wisdom (*phronesis*) which guides them towards the right things, but mere cleverness (*deinotes*) which is just as likely to guide them to the wrong things as to the right ones. For Aristotle, then, one cannot be practically wise if one has not already developed the correct values, and those values are only developed through years and years of ethical training.

Unfortunately, previous advocates of *phronesis* in teacher education do not sufficiently address the need for extensive ethical habituation prior to developing *phronesis*. Although nearly all of them acknowledge that the ethical component of *phronesis* is inextricably linked to the intellectual, they do not explain how this component is developed. This lack of explanation gives the illusion that the ethical component of *phronesis* arises naturally out of the intellectual (Pickup, 2020, pp. 15-17), or that the ethical component already exists in teachers prior to the intellectual (Kessels & Korthagen, 1996). Aristotle is clear that neither can be the case: the moral and aesthetic values that must be in place *before phronesis* arises neither come about through the development of *phronesis*, nor occur spontaneously in students.

This presents a serious problem. Although there are important advantages in thinking about teacher expertise and education through the lens of *phronesis*, a robust understanding of the concept seems to require a prior process of habituation which cannot be assumed to be in place for students. This is not to say that students arrive in teacher education programs incurably vicious or without any virtue whatsoever. Rather, according to Aristotle, *phronesis* is available only to those people who have a settled and stable disposition to act ethically on all occasions. Students who, for example, , or even who have moral ambivalence about whether their values are the right values are not capable of developing practical wisdom. As Aristotle (1984) says: "Therefore it is evident that it is impossible to be practically wise without being good" (NE, 1144a36-37). When researchers gloss over the difficulty of cultivating the moral dimension of *phronesis*, not only are they *not* advocating true *phronesis*; they are ignoring the imperative need for the ethical training of teachers.

What then are we to do for students who enter teaching education programs without the right virtues in place through a prior habituation process? We argue that while we cannot train the vast majority of preservice teachers in the virtue of *phronesis*, we can start them on an *rehabituation* process in the requisite ethical and aesthetic virtues, which can provide the foundation upon which *phronesis* can be built in their subsequent years of teaching. By helping students see the importance of rehabituation as a precursor to developing teacherly *phronesis*, teacher educators have the potential to set students on the path to exemplary teaching; they just must be more modest in their expectations about what can be achieved in their teacher education programs. *Phronesis* may be the ultimate goal, but teacher educators need to be realistic about what can be achieved in teacher education programs. Realism is important because preservice teacher candidates need to enter the field with a realistic plan for growth towards *phronesis*.

In order to articulate our more modest proposal regarding the use of an Aristotle-inspired teacher training model, we first demonstrate the value of *phronesis* for teachers and why teacher educators should want to encourage their preservice teachers to see *phronesis* as the peak of teaching excellence. Second, we show that while *phronesis* is a compelling , it is, according to Aristotle, not possible for the vast majority of preservice teachers, owing to their lack of a prior habituation in the moral virtues. Third, we argue that while *phronesis* is not a realistic goal to be achieved in the short space allotted to teacher education programs, teacher educators can inspire students to begin a rehabituation process by means of experiences we call "epiphanies." We draw on Aristotle's supposed philosophical rival, Plato, to outline what these experiences involve and how they provide the necessary psychological resources to jumpstart the pursuit of *phronesis*. We conclude with the strategies teachers educators can use to encourage these kinds of experiences in their classrooms.

Phronesis and Teacher Expertise

Before we can understand the ways that the *phronesis*-perspective needs to be modified for teacher education, we should first consider what exactly proponents believe *phronesis* has to offer the practicing teacher. There are generally four advantages that advocates ascribe to *phronesis*-based conceptions of teacher expertise in comparison to other models:

1. Holism over reductionism

Advocates of *phronesis* argue that expert practitioners exhibit a type of reflective action in which their various forms of cognition, knowledge, values and judgments constitute a complex whole, "an amalgam of knowledge, virtue, and reason" (Coulter & Wiens, 2002, p. 16), rather than a set of isolatable principles, rules or procedures. This holistic view of expert action is supposed to pose an alternative to a more reductionistic conception, according to which the elements of pedagogical expertise can be precisely stated and communicated via, for example, course textbooks or research papers. Advocates of *phronesis* thus typically criticize approaches to teacher education that focus only on lessons to be drawn from "scientific understanding" or *episteme*, as it is sometimes put, (Kessels & Korthagen, 1996), which is characteristically expressed in this form (e.g. Slavich and Zimbardo, 2012). They argue that teacher education must additionally offer students opportunities for "engaging the complexity of lived contexts in which teaching and learning occur" (Pickup, 2020, p. 9), so that aspiring teachers can learn to master the unforeseeable contingencies of the practical environment. Moreover, the *phronesis* perspective urges that we see teacher action as an intrinsically ethical, aesthetic and even "artistic" (Eisner, 2002) form of engagement, combining intellectual knowledge with a sense of what is right and fitting for the teaching and learning context. It therefore encourages teacher education programs not to forget the role that these dimensions have to play in the development of excellent teachers: "[A]cquiring the requisite knowledge and virtue, and matching that knowledge and virtue to particular situations understood correctly requires a different form of wisdom: *phronesis*" (Coulter & Wien, 2002, p. 16).

2. Contextualism over Universalism

In line with this holistic perspective on teacher expertise, advocates of *phronesis* believe that a phronetic understanding of pedagogical action more realistically depicts the concrete practical demands and challenges facing teachers in learning spaces than does an approach that proceeds from various idealized methods or strategies. Because the challenges of teaching are often extremely context-sensitive—involving subject matter that changes from day to day and students' emotional states that can change from minute to minute—teachers will have to be able to react to problems and dilemmas whose particular options for resolution are in principle unforeseeable. For this reason, there is always a "gap" between the recommendations of scientific inquiry and the exigencies of the practical environment, a gap that is to be filled by the teacher's *phronesis*. These recommendations tend to be "too abstract, too much stripped of all kinds of particulars that are predominant in concrete experience: emotions, images, needs, values, volitions, personal hang-ups, temper, character traits, and the like" (Kessels & Korthagen, 1996, p. 20). What teachers need is therefore what advocates have called "discernment" or "perceptual knowledge," which allows them to "discern particulars and make judgements about how to act in different situations and contexts. Discerning teachers are sensitive to the particulars of students' lives and stories, to all the inconvenient complications and the competing demands of practice" (Phelan, 2005, p.

96). Such discerning knowledge recognizes the "importance of particularity" (Eisner, 2002, p. 21) and thus contrasts with the context-independent or "universal" theories of pedagogical practice and expertise delivered by educational research, particularly in its basic inarticulability. The discerning knowledge of *phronesis* is considered to be "tacit" (Kessels & Kothagen, 1996) or "embodied" (Pickup, 2020) and thus requires more practice-oriented forms of training and habituation in teacher education.[4]

3. Exemplarism over Propositionalism

A closely related aspect of the *phronesis* perspective on teacher expertise is its reliance on exemplary actors as the providers of standards and guidelines for action rather than theories or research findings. Because the knowledge involved in *phronesis* is particular rather than universal, it will be found not in general statements or propositions about practice but in particular examples and exemplary individuals who embody forms of expert action. Therefore, when deliberating about right action, "[t]he appropriate criterion for correct choice . . . is not its correspondence or consistency with an abstract rule or principle . . . , but instead what a concrete human being would do, the person of practical wisdom" (Kessels & Korthagen, 1996, p. 20). In other words, teachers of *phronesis* who encounter difficulties or dilemmas in the classroom reflect on what a good or wise or expert teacher would do in that situation instead of attempting to draw inferences from a relevant theory or research finding. This is an "exemplarist" mode of action because it takes as its point of departure the particular actions, qualities, intentions and style of exemplary individuals, which Aristotle terms the *phronomoi*. *Phronomoi* display a "rightness of tone and a sureness of touch that could not be adequately captured in any general description" (Nussbaum, 1986, p. 304) and that therefore must be observed and practiced *in situ*. This is why it is essential that aspiring teachers come into contact with excellent teachers during their teacher education and "apprentice" into their particular ways of conducting the learning environment and handling problems therein (Higgins, 2011).

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[4] This is not to say that no general or universal principles can be derived from virtuous actions and the *phronesis* needed to hit the golden mean. One can indeed draw general principles, but the general principles cannot be applied to new situations without significant contextualization. Kristjánsson (2005, p. 110) articulates the balance between the general and the particular in Aristotle in the following:

> The picture that emerges is of Aristotle as a foundationalist (more specifically, a moral naturalist who bases his normative claims on facts about human nature: about what actually makes people thrive) and a moral generalist for whom certain things are always noble and right. This does not mean that all moral action is unproblematically codifiable in light of an all embracing ethical theory; such a theory would be impossible to fathom for an imperfect being. Because of the endless variety of novel circumstances that we may be caught up in, we need perceptual awareness – that is, dynamic appreciation of the uniqueness of each particular situation – to guide us to the right course of action, just as a law needs to be constantly rectified and interpreted to take into account new situations. Morality, like law, is thus contingently, but not necessarily, uncodifiable.

This means that the need for teachers to have the "perceptual awareness" does not mean that it is merely a subjective awareness that is generated independently of universal principles. They may not be able to immediately explain the exact specifics of their perceptual awareness, but they would be able to point in a general direction to general and broad principles. But the point we are most concerned to make is that teachers cannot gain the right perceptual awareness in a class which merely lays out a system of pedagogical or ethical rules or guidelines.

4. Humanism over technicism

The final commonality among advocates of *phronesis* is the critical assessment of "technicist" understandings of teacher expertise that are typically used as foils in the defense of *phronesis*. The practice-oriented forms of knowing and acting that *phronesis* highlights is supposed to be truer to both the teacher's and the student's ways of navigating through the educational space than the "traditional" or even "orthodox" (Hibbert, 2012) understanding of how practice can be informed by knowledge. According to this latter model, the practitioner encounters some problem or exigency stemming from the environment, calls up the relevant theory or research finding, works out the implications of this research within the current context, and then acts out those implications in order to achieve the desired practical result. For advocates of *phronesis*, this approach belies an overly top-down, inflexible and compartmentalizing mentality, which rigidifies action and casts the practitioner as a kind of automaton. Moreover, *phronesis* advocates criticize the aspiration to "value-free" knowledge that sometimes defines educational research. They call attention to the value-ladenness of even the best theories and research findings in education, as well as the environment in the classroom. Expert teachers do not aspire to ethical neutrality, but should constantly attempt to realize relevant values in their classrooms, including intellectual humility, open-mindedness, courage, curiosity and inclusion. Phronesis "addresses the particularity of things and situations, it addresses their distinctive conditions so that someone could decide how to move in a morally framed direction" (Eisner, 2002, p. 381).

Stated in these terms, it should be obvious why the concept of *phronesis* has been enthusiastically defended in teacher education. *Phronesis* promises to do justice to the tacit and embodied knowledge that excellent practitioners develop through their own reflective experience, and to encourage teacher education programs to do a better job of passing on this knowledge to the next generation of teachers. Although the knowledge gained by educational research and communicated by academics in schools and departments of education is undoubtedly essential to the process of becoming an expert in teaching, it is not sufficient by itself. Even apart from the positive arguments for *phronesis*, new teachers consistently attest to feeling unprepared and overwhelmed when they first enter the classroom after their teacher education program (Santoro, 2021; Dias-Lacy & Guirguis, 2017; Darling-Hammond, 2006; Fantilli & McDougall, 2005). They find themselves awash in the complexities and particularities of the real world of teaching, and this alone constitutes an important challenge to teacher educators to rethink how their programs prepare students.

Moreover, advocates of *phronesis* are right to point out the worrying tendency towards reductionism and technicism in teacher education, which places emphasis on general, abstract and discrete knowledge of teaching and learning rather than embodied insight into how to teach excellently as exemplified by living, breathing educators in particular contexts. Consider once more Blömeke et al.'s model of teacher expertise mentioned in the Introduction to this article. According to this model, mathematics teachers should possess competencies in each of the following domains: (1) mathematics content knowledge, (2) skills to diagnose mathematical student errors, (3)

mathematics pedagogical content knowledge, (4) mathematics instruction skills, (5) general pedagogical knowledge, and (6) classroom management skills. Each of these domains are undoubtedly essential to excellent teaching, and they strongly resemble Lee Shulman's original catalogue, especially (1), (3) and (5). However, there are several domains that have dropped out of view. For Shulman (1987), knowledge of "educational contexts" is essential to excellent teaching, as well as knowledge of "educational ends, purposes, and values, and their philosophical and historical grounds" (p. 8). These domains are missing in the Blömeke model, quite tellingly. According to the *phronesis*-perspective, expert action is defined not only by the forms of knowledge necessary for technical mastery, but also by the pursuit and consistent achievement of ends that experts recognize to be valuable. When this value-oriented form of reflection is missing from the cognitive framework of practitioners, they cannot be said to be truly engaged in their particular domain of practice, no matter how skillful they may be. In other words, teachers are not really "teaching," and certainly not teaching *well*, unless they can appreciate and consistently realize the values intrinsic to the educational process in their subjects, such as the value of learning and intellectual growth, the value of intergenerational community, and the value of engaging with academic disciplines in their classrooms. As Hibbert (2012) puts it, "As educators, we are teaching in every interaction, every decision, and every response—including every silence. To act phronetically is to behave in a way that demonstrates ethical practicality; doing what is needed, when it is needed, to bring about the desired ends through our actions" (p. 67).

There is, therefore, good reason to embrace the concept of *phronesis* as an essential intellectual capacity that is present in all highly effective teachers. At the same time, there is also reason to be skeptical of at least some of the promises that the advocates of *phronesis* have made. In the next section, we outline what some of the potential weak points of the phronetic perspective on teacher education are, particularly with regard to the belief that *phronesis* can be taught broadly in teacher education programs.

Phronesis Reconsidered

Although a phronetic approach to teacher education has several important advantages, the way the concept of phronesis has been taken up by educational researchers is flawed in two important ways. First, as Kristjánsson (2005) points out, there tends to be an overemphasis on the particularist nature of expert knowledge and action among advocates of *phronesis*, an overemphasis which ultimately misconstrues Aristotle's own views about the notion. According to Kristjánsson, Aristotle was what we might call a "compatibilist" with respect to the various forms of knowledge that are available to educators. That is, Aristotle thinks that expert actors (*phronomoi*) draw support not only from their embodied knowledge about the means to achieve proper ends (*phronesis*), but *also* from technical knowledge (*techne*), abstract knowledge (*episteme*) as well as theoretical knowledge (*theoria*). This compatibilist position justifies—effectively, we think—the place of the standard academic forms of knowledge already found in teacher education programs (*episteme* and *theoria*), while rightly urging that more attention be given to *techne* and *phronesis*. At the same time, it captures something that seems characteristic of expert teachers: their willingness to draw practical insight from a variety of

sources and perspectives, from sociological accounts of the social role of the educational system to theories about the goals of education in a democratic society.

The second flaw in the appropriation of *phronesis* for teacher education is much more serious. There seems to be a dramatic oversight among the existing defenses of *phronesis* in teacher education concerning the role of moral development in cultivating *phronesis*. Advocates have correctly indicated that embodying *phronesis* means not only having technical know-how, but also "seeing 'what is good for themselves and what is good for people in general'" (Pickup, 2020, p. 8). Put differently, advocates of *phronesis* rightly argue that *phroneis* has both an intellectual component—an expert ability to reason from means to ends in order to determine the best way to achieve student learning—and also a normative component—an ability to know what the morally *right* thing to do in a given situation and direct the teachers and students actions towards that end. As Halverson (2004) says: "Phronesis represents the accumulated wisdom, embodied in character, which helps us to determine which action is worth taking in a given situation. Phronesis comprises the moral compass of our character" (pp. 12-13). Although advocates consistently point out this ethical dimension of *phronesis*, they have generally neglected the essential educational implications that follow from it. According to Aristotle, while *phronesis* accurately determines which set of actions need to be done to achieve a virtuous end, *it does not provide the end itself*. Only an already-existing moral knowledge in the practitioner can provide the end, and moral character is not the same as *phronesis*. "Again, the function of [human beings] is achieved only in accordance with *phronesis* as well as with moral virtue; for virtue makes the aim right, and *phronesis* the things leading to it" (NE, 1144a7-9). In this passage, Aristotle famously distinguishes *phronesis* from moral virtue (*ethike arete*), claiming that people must have both to be fully virtuous. For Aristotle, "moral virtue," which only comes by way of habituation, guides the teacher to identify the morally correct thing to teach and also the morally correct way to teach it. *Phronesis*, by contrast, does not identify the morally correct thing to teach or the morally correct way to teach it, but only the most practically effective way to achieve those two moral ends.

For example, a person with the right moral habituation wise might see that the teaching of mathematics for instrumental reasons—say, so that students can merely graduate and get a job—is inferior to teaching mathematics for intrinsic reasons—say, because mathematics expresses the beauty of the natural world in a rational and elegant way. They have been habituated in the study of mathematics and therefore they simply "see" the beauty contained therein; whereas a neophyte would only see numbers and algorithms that yield abstract results. In this way, the moral teacher knows what the morally correct thing to teach is. But not only this. They also know that certain *ways* of teaching the morally correct thing are morally superior to other ways of teaching the correct thing. For instance, the morally wise person might see that teaching students to see the beauty of mathematics by making them do algorithmic exercises by themselves in front of a computer screen for several hours a day is morally inferior to inviting them to be co-investigators with their teacher and peers about the algorithms, discussing the beauty that they think they see. It is entirely possible that both of the techniques might yield the right results—the students begin to see the beauty of mathematics—but the latter one is more conducive to human flourishing because it involves more characteristically human experiences. According to Aristotle, only the morally wise person could be

counted on to make the morally correct decision about these morally complex issues, and this wisdom only comes by way of a lengthy habituation process.

So where does *phronesis* come in? It comes into play after the morally wise person has decided on the morally correct thing to teach and the correct way to teach. At that point, *phronesis* helps the teacher evaluate the psychological, pedagogical, social and environmental conditions that will either support or inhibit the effective execution of these morally-infused decisions. For example, the teacher's *phronesis* is what helps them evaluate the social make-up of the class to determine whether the students know enough of the rudiments of mathematics to be capable of seeing the beauty of a triangle or if they are only ready to see the beauty of a square. The moral wisdom of the teacher sees that both triangles and squares are beautiful, but *phronesis* sees which should come first; *phronesis* intellectually assesses the demographic makeup of the class, what has been taught before, the energy level of the students, their already existing motivation, and so on. Similarly, the teacher's moral wisdom knows that the morally correct way to help students see the beauty of mathematics is to have the work together in groups, while discussing their burgeoning understanding of beauty, but *phronesis* tells the teacher whether the groups should be groups of three, or four; or whether the students should discuss in their seats amongst themselves, or out .loud in front of the class. Again, *phronesis* makes the determinations through an intellectual analysis of the psychological, pedagogical, social or environmental forces at play in the classroom. But, to recall, if moral wisdom is not guiding this intellectual capacity, then "*phronesis*" is not *phronesis*, but mere cleverness.

Thus, we see that, according to Aristotle, *phronesis* is only genuine *phronesis*, when it is guided by the correct moral vision of the teacher, and if that teacher lacks that moral vision, then *phronesis* is an impossibility. And herein lies the problem: the character or moral virtue required to develop *phronesis* can only be cultivated through a habituation process that must occur *before* this development. Aristotle says: "Therefore it is evident that it is impossible to have *phronesis* without being good" (1144a367-37). Translated into teacher education, this means that aspiring teachers will never be able to develop *phronesis* within the confines of their teacher education program unless they already have the correct character virtues in place. Put in the terms of the Kristjánsson, Fowers, Darnell and Pollard (2021) model of *phronesis* introduced above, teachers without prior moral habituation will lack the evaluative basis of the constitutive, integrative and blueprint functions of phronetic action, rendering their practical interventions only inconsistently effective at best.

From an Aristotelian perspective, there are five reasons to think that prior habituation is essential to cultivating *phronesis*. The first is that for Aristotle, none of the moral or aesthetic virtues arise within us by nature (NE1103a19-20). As human beings, we have the *capacity* to develop the virtues (unlike other animals), but the virtues exist in potentiality for us. This means that while all human beings, as human beings, have the capacity to become, say, courageous people, they will never become courageous without some educational intervention. This is the first strike against those *phronesis* advocates above who assume that future teachers arrive in teacher training programs with the virtues already in place. It may happen that they have the virtues, but if they do it is because these virtues were inculcated in them at some earlier stage in their life (1103b7-25).

This leads to the second reason: the moral and aesthetic virtues cannot be apprehended only by means of reason or rational thought, even though they are consistent with it. The reason they cannot be apprehended by rational thought is because in every human there is, by nature, an irrational force that fights against reason and resists it (1102n13-28). This force is an inborn desire for bodily pleasure that exercises strong emotional sway over our motivation prior to moral education. Unlike the virtues, which do not exist in us by nature, the desire for immoderate pleasure *does* exist in us by nature. Thus, the deck is already stacked from the beginning against a person becoming virtuous. When a virtuous person *a* tries to use reason to explain to a non-virtuous or pre-virtuous person *b* why being temperate (forgoing some pleasure) is superior to over-indulging in that pleasure, there is nothing in person *b* (yet) which confirms this argument. The genuine enjoyment of the temperance that the virtuous person *a* experiences is still lacking in person *b*, and therefore person *b* simply cannot imagine what it would be like to take pleasure in temperance. It would be like trying to explain to a blind person that the beauty of a sunset is superior to the beauty of the smell of an artificial car deodorizer. Even though the blind person might recognize that a car deodorizer is not as beautiful as the natural odor the deodorizer is trying to mimic, they would still find it impossible to be rationally convinced that a sunset was more beautiful than the deodorizer, simply because they cannot conceive of the sight of a sunset. But not only that, the virtue of temperance requires that they stop enjoying whatever bodily pleasure they are experiencing in favor of some supposedly more pleasurable virtue which they cannot experience. Again, to recur to our example, it would be like telling the blind person that they should forgo the pleasure of the car deodorizers in order to experience the superior pleasure of the sunset. This would seem completely unreasonable to them because, of course, it would be to give up one pleasure, and in return get no pleasure whatsoever. Since Aristotle believes that all human motivation to action is a result of pleasure and pain (1104b9-11), a person who does not have the virtue of temperance cannot, by definition, ever be convinced by reason to adopt the virtue, since, for them the virtue of temperance does not cause pleasure, but only pain.

This leads to the third reason. Since it is impossible to use reason to convince someone to act or acquire the virtues, the only way for them to become virtuous is to be raised in such a way so as "both to delight in and to be pained by the things that we ought" (NE, 1104b 13-14). How can we raise our children to have the right pleasures and pains? Aristotle's answer obviously is not to reason with them, which can have no effect, but rather to "habituate" them to take pleasure in virtue above all else. For Aristotle, humans are the kind of beings who develop tastes and desires based on the activities to which they are exposed. Certain bodily pleasures exist almost immediately. The first time a child tastes something sweet, it immediately, and involuntarily, smacks its lips and relishes the flavor. There are many such pleasures that infants and young children enjoy that require little to no exposure to create the pleasure. However, the vast majority of pleasures that an adult experiences are pleasurable only because the adult has long been exposed to them. Some of the most common pleasures in the modern world that people remember as not liking as children but liking as adults include certain vegetables, coffee, fine art, alcohol, reading, tobacco, and so on. These pleasures do not immediately strike most young people as pleasurable, but eventually, given enough exposure, these pleasures often become more pleasurable than the spoonful of sugar is to the infant, but only

because of long exposure, not because of argument. Aristotle believes that the virtues are similar to these pleasures; they are experienced as pleasurable only after long exposure. People must be habituated to enjoy them, and habituation only happens when a person in authority over the child compels the child to act according to virtue over and over again (1103b7-25), just like eating one's vegetables. The reason compulsion is necessary is because, as was stated earlier, a person will not have any motivation to act virtuously, since they will not initially take pleasure in the action. Someone must force them to do the action often enough, and for a long enough period of time, for the pleasure to come into existence.

This leads us to the fourth reason. Since habits create pleasures, it is essential for people to develop the *right* habits from their earliest youth (NE, 1104b 13-14). The reasons that children must develop the right habits as soon as possible are manifold. The first is that each day that they do not develop the good habits, they are, by definition, deepening their taste for bad habits. Because human beings will, according to Aristotle, always pursue pleasure and avoid pain, every action a person takes will be dictated by whatever gives them the most pleasure. Since human beings are not born taking pleasure in virtuous actions, left to their own devices, they will naturally avoid pursuing virtue and instead will pursue other pleasures. The problem is that each time they engage in these other pleasures, Aristotle explains that they will come to prefer those pleasures a little more, because, as we saw above, we take pleasure in those things in which we participate. Thus, each day we engage in non-virtuous behavior, we end up preferring that pleasure a little more; and each day we desire this pleasure a little more, the longer it will take to be habituated in the opposite direction, if we are ever so fortunate as to have someone come along and force us to act differently. The second reason we need to be habituated into the virtues as soon as possible is not only to avoid the deepening of our non-virtuous habits and their attending pleasures, but because the older we get the more likely we are to resist people if they try to force us to act contrary to our desires. And even if we are young enough that these people can overcome our resistance, our growing agency and independence may find surreptitious ways to subvert the habituation process. Our "teacher" keeps putting vegetables on our plates, and it appears that we are eating them, when we might actually be putting them in our pockets to dispose of later. Or worse, we eat them only to avoid the critical gaze of our teacher, using each instance as further evidence in a narrative about how wrong or unfair or unjust the situation is. Thus, the older we are in the habituation process the more difficulties arise in ensuring that the habituation will be successful.

The fifth reason follows from the previous one: if, by the time we have become adults, we have not been habituated into virtue, Aristotle argues that there is very little that can be done for us beyond being given political laws that prevent us from following our pleasures to extreme ends (1180a3-13). Aristotle claims that this will produce a slight habituation process that will protect many people from becoming radically vicious, but it will do almost nothing to produce genuinely virtuous people. This is the case even if the laws are created by wise and virtuous legislators. But, of course, since most legislators are themselves not fully virtuous, their laws will be even less effective at fostering virtue in adult citizens. In sum, for Aristotle very few people in average societies will be virtuous—the vast majority will be self-indulgent and prone to follow their bodily desires. This does

not mean that they are radically vicious, but they will be largely incapable of following or teaching the edicts of virtue.

With these five reasons in mind, we should already see the problem with the promotion of *phronesis* in teacher education. None of the defenders of *phronesis* gives a sufficient account of the moral "starting points", as Aristotle calls them (1144a31), that are absolutely necessary for developing *phronesis*. If Aristotle is right that most adults do not have these starting points in place, then most of our teacher candidates will not have them in place, and if they do not, then they are incapable of developing *phronesis* no matter how much their teacher training program touts it.

Unfortunately, this fact is almost completely ignored by the previous advocates of phronetic teacher education.[5] The general tenor is that a teacher can, whatever their background, cultivate *phronesis*, and in so doing achieve both the technical artistry necessary to help students learn the curriculum and also the moral vision to inspire students to grow as moral people.[6] Among the advocates of *phronesis*, the one who comes closest to identifying the need for moral habituation is Birmingham (2004, pp. 319-321), who does an exemplary job of explaining the inextricable relationship between *phronesis* and the character virtues.[7] Following Dewey, she lists numerous character virtues teachers ought to pursue, like *wholeheartedness*, *open mindedness*, and *responsibility*. However, while Birmingham discusses the conceptual structure of these virtues, she does not provide ideas on *how teacher educators might foster these virtues* in their future teachers. It is assumed that future teachers will naturally value these virtues, but, according to Aristotle's conception of virtue, valuing such things is not natural at all, but requires years of habituation before they become the guiding aims of the teachers.

What, then, is to be done? Of course, we might conclude that we should simply dispense with the Aristotelian framework and the moral pessimism that underlies it. While we do think a classical Aristotelian approach needs to be enriched by the insights and perspectives won by the research on teacher education in the last several decades, the problem is Aristotle seems to be *right*

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[5] The one possible exception is Kinsella and Pitman (2012) who ambiguously say "A direct consequence of taking *phronesis* seriously is the need for professional education to emphasise the cultivation of professional judgement, grounded in the moral purpose of judging how to act for the good of the student, client, patient, and society (recognising that what constitutes 'the good' cannot be essentialised)" (p. 167). The reason this statement is ambiguous is because it is not clear what they mean by the "moral purpose of judging how to act for the good of the students." If they mean "having a clear, moral perception of what is good for the student, and then using *phonesis* to find the *mean* in every situation to actualize that moral perception" then they are sensitive to the fact that one cannot have *phronesis* without first having a moral perception of the proper end of human beings given by character virtue. However, if they mean "having the ability to find the mean in order to act for the good of students, which the teachers themselves do not supply through a perception given by character virtues" then they are not sensitive to the need for the character virtues first. In any event they do not make this clear and they do not offer a method for producing these character virtues, which suggest that perhaps they meant the latter and not the former.

[6] Both Noel (1999) and Dunne (1997) draw stronger attention to the fact that one must have character virtues if one has any chance of developing *phronesis*.

[7] Halverson (2004) also properly explains the relationship between *phronesis* (which can be developed through teaching) and the character virtues (which can only be developed through habituation). However, like Birmingham, he does not explain the significance of the habituation process necessary to have the character virtues. Like all the theorists above, he seems to think that the character virtues will naturally spring up from the process of developing *phronesis*, when, in fact, Aristotle says they will not happen naturally. Most importantly of all, if they are non-existent because they have not been habituated, then it is impossible for *phronesis* to be developed. As we shall see below, for *phronesis* to come into being, it must be guided by habituated character virtues.

about his pessimism, at least in this one aspect: Many of us have not had a sufficiently rigorous and effective moral education that prepares us to do the right thing consistently in complex practical situations like the teaching environment. Many experienced teachers report suffering from moral confusion, demoralization or a lack of moral vocabulary in light of the challenges of the teaching profession (Santoro, 2021; Sanger and Osguthorp, 2011; Socket and Lepage, 2002; Sanger, 2001; Hansen, 1995; Fenstermacher & Richardson, 1993), and one reason for this might be a lack of moral education which allows them to access the goods of teaching in spite of these challenges. Moreover, the phronetic perspective seems to be right about the nature of teacher expertise: i.e. its holistic, contextual, exemplarist and humanistic character. Thus, to our minds, rejecting the Aristotelian framework may make our lives as teacher educators easier, but it would also impoverish the educational experience and preparation that aspiring teachers require.

The question then becomes, if we are not able to provide an education in *phronesis* in teacher training programs, what can be done to help prepare students for the development of *phronesis* in the first years of teaching? In what follows, we argue that teacher educators can provide the "starting points" necessary as a precondition for a moral rehabituation process in which preservice teachers can embark on during their education, and after they become teachers. To see how these starting points can be developed and the motivation the provide preservice teachers to pursue rehabilitation, we will turn to another ancient philosopher who, like Aristotle, believes *phronesis* is essential for excellence in teaching, but also believes that it cannot be developed until after one develops the moral virtues through a habituation process. The philosopher in question in, Plato, Aristotle's supposed philosophical rival.

Phronesis and Epiphany

Like Aristotle, Plato believes that human beings require an extensive introduction and habituation in the virtues in order, later in life, to act well. In a passage from the *Laws*, Plato (1997) gives a clear account of the importance of early childhood habit-formation that could have been taken straight from the *Nicomachean Ethics*.[8]

> I call 'education' the initial acquisition of virtue by the child, when the feelings of pleasure and affection, pain and hatred, that well up in his soul are channeled in the right courses before he can understand the reason why. Then we he does understand, his reason and his emotions agree in telling him that he has been properly trained by inculcation of appropriate habits. Virtue is this general concord of reason and emotion. But there is one element you could isolate in any account you give, and this is the correct formation of our feelings of pleasure and pain, which make us hate what we ought to hate from first to last, and love what we ought to love. (654c-d)

For Plato as for Aristotle, this early education is necessary in order to train our feelings of pleasure and pain to be directed towards the things that are excellent and best for us, and away from the things that inflame our immoderate desires for pleasure and vice. As he puts it in the *Seventh Letter*, "For no man under heaven who has cultivated such practices [vices] from his youth could possibly

[8] All references to Plato's texts refer to *Plato: Complete Works* (Plato, 1997). As is typical in Plato scholarship, we use line rather than page references.

grow up to be wise—so miraculous a temper is against nature—or become temperate, or indeed acquire any other part of virtue" (326c). Plato is not saying that it is impossible for a person with the wrong upbringing to ever become wise, but only that it is impossible for them to become wise *unless they are rehabituated at some later point*. We know that this is what Plato means because previously in the *Letter*, Plato describes a person who "cultivated such practices [vices]" and yet experienced such a powerful epiphany through his conversations with Plato that he resolved to rehabituate himself through cultivating a different set of practices. Plato tells the story of Dion, who was raised in the indulgent lifestyle of the Syracusans. According to Plato, this involved "men gorging themselves twice a day and never sleeping alone at night, and following all the other customs that go along with this way of living . . . and spending their all on excesses, and being easy going about everything except the feasts and the drinking bouts and the pleasures of love that they pursue with professional zeal" (326b-d).

Despite this poor habituation, which would seem to render Dion all but lost with respect to the attainment of virtue, Plato maintains that Dion's character was transformed through conversation with Plato. Dion "listened with a zeal and attentiveness I had never encountered in any young man, and he resolved to spend the rest of his life differently from most Italians and Sicilians, since he had come to love virtue more than pleasure and luxury" (327b-c). Though his preparation for virtue was seriously undermined by the culture of Syracuse, Dion was able to have a glimpse of virtue through his interactions with Plato. Put differently, he had an *epiphany* of why it is preferable to live a virtuous life rather than a life of luxury and pleasure, an experience that Plato describes as issuing from "long-continued intercourse between teacher and pupil, in joint pursuit of the subject." When this is done right, an insight can occur in the individual which shows him or her a vision of a better, more flourishing life. This insight is not "something that can be put into words like other sciences;" rather "suddenly, like light flashing forth when a fire is kindled, it is born in the soul and straightaway nourishes itself" (341c).

In the *Seventh Letter* we are not given a great deal of information about the phenomenological nature of Dion's epiphanies, except that they were powerful enough for him to radically transform his life. However, Plato gives us insights into the kinds of experiences Dion must have had in some of his dialogues, for example the experiences of Alcibiades as depicted in the *Symposium* and in the *Alcibiades I*. In these dialogues we see the powerful emotional force of the epiphanies and how the provide motivational starting points, which cause the people having them to want to change their lives.

> If I were to describe for you what an extraordinary effect his words have always had on me (I can feel it this moment even as I'm speaking), you might actually suspect that I'm drunk! Still, I swear to you, the moment he starts to speak, I am beside myself: my heart starts leaping in my chest, the tears come streaming down my face, even the frenzied Corybantes seem sane compared to me—and, let me tell you, I am not alone. I have heard Pericles and many other great orators, and I have admired their speeches. But nothing like this ever happened to me: they never upset me so deeply that my very own soul started protesting that my life—*my* life!— was no better than the most miserable slave's. And yet that is exactly

> how this Marsyas here at my side makes me feel all the time: he makes it seem that my life isn't worth living! (*Symposium*, 215b-c)

At first glance, this passage might suggest that Alcibiades is despairing of his life and wishes he were dead, but it is clear that that is not what he means by his "life" not being worth living. What he means is that the life he was currently living, which like the Syracusian life Dion used to live, was full of debauchery and vice. He is saying that when he talks with Socrates he no longer wants to live a debauched life, but one of virtue. We see this in the following.

> If you are foolish, or simply unfamiliar with him, you'd find it impossible not to laugh at his arguments. But if you see them when they open up like the statues, if you go behind their surface, you'll realize that no other arguments make any sense. They're truly worthy of a god, bursting with figures of virtue inside. They're of great—no, of the greatest—importance for anyone who wants to become a truly good man. (ibid., 221e-222a)

That Plato thinks epiphanies are essential to the moral development of young people is reflected in Alcibiades' claim that the figures of virtue that he sees behind Socrates' arguments are of the "greatest" importance to the moral life. According to Plato, if an adult is to become a truly good person, she must be able to see these "figures bursting forth." That is, they need to be moved by a recognition of profound value in something that had previously discounted or misunderstood. The importance of this recognition lies in the activation of the individual's *emotions* and *desires* as well as their cognitive apprehension of the new source of value. When this emotional and volitional response is sufficiently strong, the experience can play a crucial role in the development of *phronesis*, and it seems to do so in the case of Alcibiades. What happens to Alcibiades is that he wants to undergo a *habituation process* that he knows living a virtuous life would require. This is seen both in the *Symposium* and also in the *Alcibiades I*. In the *Symposium*, Alcibiades says: "But I once caught him when he was open like Silenus' statues, and I had a glimpse of the figures he keeps hidden within: they were so godlike—so bright and beautiful, so utterly amazing—that I no longer had a choice—I just had to do whatever he told me" (216e-217a). In the *Alcibiades I*, he says something similar:. "We're probably going to change roles, Socrates, I'll be playing yours and you'll be playing mine, for from this day forward I will never fail to attend on you, and you will always have me as your attendant….Yes, that is right. I'll start to cultivate justice in myself right now" (135d-e).

There are several things that are essential to note here for drawing out the implications of epiphany for teacher education. First, Alcibiades claims that he will "start" the cultivation of justice. Alcibiades has come to see his former desires and his former way of life as incompatible with virtue and the happiness it will bring, but he also recognizes that this knowledge alone does not make him virtuous; it prepares him for virtue but does not fully accomplish the fact. This is the nature of epiphanies. He must start the process of cultivating virtues which do not yet move him in the way they should.[9] Alcibiades' epiphany is thus a kind of "Plan B" (Kristjánsson, 2014), providing him the

[9] Unfortunately, unlike Dion, it is clear both from the rest of the *Symposium* and the history of the real Alcibiades that he does not make good on his promise to follow Socrates' advice and to be rehabituated by him. Instead he falls back into his bad habits. This will always be a danger for people who have an epiphany—the motivation that comes from the epiphany is always only temporary and unless the person immediately begins to develop new virtuous habits from within a community of mentors or friends who can guide them in their new habits, they will fall back into their habitual ways of

motivational impetus to make up for a habituation into the virtues which should have occurred previously. Translated into the realm of phronetic teacher education, this means that, insofar as pre-service teachers also lack the requisite ethical and aesthetic habituation, they can nonetheless grow towards *phronesis* by means of epiphanies.

Second, the character of Alcibiades' motivation, while admirable, is not quite what Socrates seems to be after in creating opportunity for epiphany. Alcibiades focuses much of his attention on Socrates the person, on how he will "attend" on him and do "whatever he tells" him, rather than on the figures of virtue that Socrates embodies or at least wants to communicate. This is a completely natural, and indeed essential, part of the aspirational process that is getting off the ground for Alcibiades. We feel immensely indebted to the people who inspire us to become better versions of ourselves and who point us towards the values and ideals that come to (re)define our lives. As early aspirants, we require support from mentors and peers (Callard, 2018). But this support is also a vehicle to something outside of it, the value or good that has motivated our efforts. Alcibiades focus thus also carries a danger within it if it is not ultimately redirected. Epiphanies are not centrally about the teacher-student relationship, but about the thing to which that relationship should be pointing. For Plato, this thing or target is a model of human flourishing that teachers can, in their own personal ways, adumbrate for students in their classrooms.

With these two points in mind, we will now turn to more concrete implications of Plato's theory of epiphany for teacher education. In the following section, we will discuss a contemporary example that exhibits some of the characteristics of epiphany and that suggests how we might integrate such experiences into a phronesis-inspired teacher education.

Implications for Teacher Education

How might epiphanies be cultivated in teacher education? It seems to us that the best way to answer this question is via a kind of thought experiment. Consider the case of a student, let's call him Daniel, who is about half-way through his teacher education program. Daniel is an amiable and friendly person, and he is content in his studies in his program, but he has chosen to become a teacher largely for "extrinsic" reasons. His mother was a teacher and urged him into teaching because of the nice benefits of tenure and the solid income one can expect. Daniel finds this kind of reasoning persuasive. Like his mom, Daniel thinks that job stability and a good income are perfectly acceptable criteria for deciding which profession to pursue and for providing motivation in his profession when he is there. In his studies, he is good at finding out what he needs to do to get good grades in classes and meet the expectations of his professors, though he often uses online resources to seek out professors who are most lenient and have the highest grade averages. He has the tendency to get frustrated with the workload at times, especially with all the physics he has to take as a part of his program. "I'm not going to be teaching any of this to my students," he thinks to himself regularly, "Why do I have to go through so much trouble to learn it?" In spite of these bouts of frustration, he can generally power through by reminding himself of the comfortable life ahead of him.

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acting. In the final section of this paper, we will outline principles which might help teacher educators encourage a rehabituation process in their students that can help support lasting change.

To our minds, Daniel's relationship to the teaching profession is a common one, all-too common, in teacher education programs. It is a relationship that prevents Daniel from seeing the intrinsic and enduring value of teaching physics, and perhaps even more worryingly, it may make it impossible for him to connect with his students in the ways they deserve—to care about their well-being, their growth, their potential and the ways that teaching them physics can enrich their lives. Fortunately, Daniel has an experience in his teacher education program that changes things for him. Daniel finds himself in a bit of a dilemma one day when he is registering for classes. There are two professors offering classes in Advanced Dynamics for Teachers that semester. One professor has an A- average and is characterized on the professor rating website consistently with descriptions like "easy, don't even have to show up to class" or "tells you all the questions he's going to ask before exams—great guy." The other has a C- average and is described in very different terms. Daniel reads comments like "she expects a lot of you, and you have so much homework. But if you stick with it, it will be one of the best classes you'll take" and "this woman is seriously inspiring, but prepare to work your butt off." Typically, situations like these are easily solved for Daniel; he goes with the first professor without batting an eyelash. However, Daniel's problem now is that his schedule simply does not allow him to take the first professor's class. So several months later, Daniel finds himself sitting in the latter professor's class and looks at the course syllabus. The comments he read almost do not seem to do justice to how much work it, in fact, will be.

Then something unexpected occurs. The professor announces that she will not be discussing the syllabus until the final few minutes of class, that they have no time to waste and have to dive straight into the material. After a short pause, the professor says:

> We will be covering some very complex and very fundamental physical phenomena in this class, and it will be a challenge for many of you to wrap your minds around these things at first. It was extremely challenging for myself at the beginning as well. You might even think at times, 'Why do we have to cover this stuff at all if the furthest we'll go in the high school curriculum is projectile motion.' Well, I'm not going to give you a lecture about how having deeper understanding will better prepare you to teach the simpler things. I think you'll be able to see through that. No, I want to tell you a secret—it's a secret because it seems like a paradox. The more complex, the more difficult, the more strain and the more energy you pour into physics, the more you will *love* it. Yes, if you don't love physics—and with all of your heart—you will *never* be able to teach it, even if you seem to be doing so.

Daniel is taken aback. What does love have to do with physics? What kind of strange romantic is this teacher? She must be crazy! Unfortunately for Daniel, or rather unfortunately for this particular voice in Daniel's head, the professor seems to be reading his mind:

> Now, don't think I'm some pie-in-the-sky dreamer about physics. I've got an irrefutable proof that you need to love physics in order to teach it. Here's my proof. Teaching physics—teaching in general—is hard, very hard. You will have long hours. You will have worries about job security, even with tenure. You will have difficult students and difficult classes. You will have colleagues who undermine you, or administrators that don't support you. You will want to reach every student, and fail some of the time. And you will have personal issues that put pressure on your working life as a teacher. But if you love physics

> you have something that others don't have: a secret weapon that can get you through the hardest of hardships. Loving physics is contagious. A community will form around you of students who catch the fever and want to know more about it all. Knowing that you have students love you and your subject is the most powerful weapon one can have in the struggles of teaching. But in loving physics you not only shield yourself from the encroachments of real life: you will also gain a community that no one can ever take away from you, even when your favorite students graduate or even if you lose your job. You will be a physicist in a long history of other physicists—people took a deep interest in the world and dedicated their lives to figure out how it all hangs together. No matter where you end up, you will always be a part of that community—if, that is, you work hard in my class, and all your future physics classes for that matter.

Hearing the teacher's monologue, Daniel can already begin to feel the grip of his prior understanding of the teaching profession loosening. Over the course of several more weeks and months of witnessing the professor's own love of physics, Daniel realizes that he, too, loves—or rather wants to love—physics. He does struggle with all the work, and finds it immensely challenging, but the character of his struggle has transformed. It is no longer frustration that characterizes it, but aspiration—a striving to be a better version of himself, namely to be a lover of physics.

Daniel's insight, mediated by the words and actions of his teacher, is what we are calling an epiphany. If Daniel were to have remained on his prior path, he would have become at best a teacher of mediocre pedagogical ability. His focus on narrow vocational aspects of the teaching profession would, in all likelihood, have made him focus on extrinsic aspects of teaching physics: on learning the curriculum, making good grades on AP exams, smooth classroom management, and his paycheck. In doing so, Daniel would have missed the heart of the matter, the special ethical and aesthetic goods involved in teaching the next generation the acquired wisdom of the previous ones, and which—when addressed—greatly increase both the perceived value and effectiveness of his teaching for students (Pugh, 2021). His narrow approach to teaching would not only potentially put Daniel's own psychological condition in jeopardy when he comes to face the inevitable difficulties of the teaching profession; it would almost certainly make him unable to care for his students in the comprehensive way that they deserve.

Because of the epiphanic insight he had with his Advanced Dynamics professor, Daniel is on a very different path. His professor was able to awaken new sources of motivation and desire in Daniel that allow him to begin seeing his vocation very differently: as an opportunity to develop meaningful relationships with his students and a challenge to become a kind of "physics role model" to them. Importantly, this change of perspective is not effected immediately. Daniel will have to work hard to overcome the grip of his middle-class upbringing and the ways it has distorted how he thinks about himself and his future. Developing the virtue of care towards his students, an abiding love of physics, and the ability to communicate this care and love to students in a way that makes them inspired by their own engagement with the physical world—in a word, developing several of the qualities central to pedagogical *phronesis*—will likely take many years for Daniel. The crucial point is that he has a special "edge up" in having had the experience he did in Advanced Dynamics.

Daniel's is a contrived example, but it points to an experience that is not contrived at all. We think experiences like this are possible in teacher education programs, and indeed are essential to them, if we want students to care deeply about teaching and their students. In a sense, creating opportunities for epiphany in teacher education is easy, and for the reason Daniel's professor described. The love of our disciplines, if we really love them, has a contagious effect; we need only lay bare our emotional connections to the subject matter and help students see how have enriched our own lives for them to begin imagining how it might do the same for them (Pugh, 2002). At the same time, we want to emphasize that this kind of experience is not the only kind of epiphany that we will want students to have. Daniel, and any teacher education student, will likely need a broad array of epiphanies, involving insights into things like intricacies of the student-teacher relationship, the dignity of children of all backgrounds and abilities, the forms of injustice that students face in- and outside the school, the ways they can compensate for them in the classroom, and the role teaching has to play in the larger democratic community. These insights will help aspiring teachers begin to cultivate the moral and aesthetic virtues of, for example, wonder, recognition, sensitivity, empathy and justice, if they do not have them already. The reason epiphanies are needed, and why a "merely phronetic" approach to cultivating them will likely fail, is that many students—like Daniel—need to be shown that these qualities are worth having in the first place. That is what the epiphany can deliver.

Conclusion

In this paper, we have argued that previous conceptions of teacher education that aim to cultivate *phronesis* in students are admirable but incomplete. The cultivation of *phronesis* can proceed only upon the basis of a comprehensive moral and aesthetic habituation. The extensiveness of this education prevents it, along with the subsequent cultivation of *phronesis*, from being accomplished in the confines of a teacher education program. Although this fact should temper our ambitions for teacher education, it does not frustrate them altogether. Teacher education can, and we think should, be guided by the concept of *phronesis*, but more as a regulative ideal than an expected outcome. Teacher educators can help students make progress towards this ideal in their classrooms by means of epiphanies, which can lend students insight into the value and worthwhileness of the dispositions, aims and perspectives that they will need to attain pedagogical expertise.

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