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Twenty-two testable hypotheses about phronesis: Outlining an educational research programme

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The concept of *phronesis* enters educational discourse at various levels of engagement, and it continues to fascinate and frustrate educational theorists in equal measure. This article begins by charting the vagaries of three educational discourses on phronesis, and by eliciting insights from the recently burgeoning wisdom research within psychology. Mindful of the fact that making progress in the educational study of phronesis is not only a conceptual or philosophical endeavour but also an empirical one, the article elicits and illustrates 22 testable (but as yet mostly untested) hypotheses about phronesis from the Aristotelian and neo-Aristotelian literatures and hence lays the foundation of an educational research programme on phronesis. A serviceable conceptualisation will need to offer ways to evaluate the educational credibility of each hypothesis in real life, rather than just serving as a new philosophical plaything.

Keywords: Aristotle; character development; education for wisdom; phronesis

Introduction: the vagaries of the phronesis discourse(s)

The concept of *phronesis* (practical wisdom in an Aristotelian or quasi-Aristotelian sense) enters educational discourse at various levels of engagement, and it continues to fascinate and frustrate educational theorists in equal measure (Kristjánsson, 2015a, chapter 4; Burbules, 2019; Harðarson, 2019). Most theorists will agree that phronesis is some sort of a metacognitive capacity (Aristotelians call it a ‘meta-intellectual virtue’), characterising adult integrative thinking (Kallio, 2020), helping us figure out what to do when we get ‘stuck’ (Burbules, 2019, p. 131), particularly (or perhaps exclusively) in the moral domain. This is the juncture at which consensus ends and controversies begin—exacerbated by the fact that the intellectual father of the concept, Aristotle himself, was unhelpful in unpacking it with any clarity.

Here are three of the ‘various’ relevant levels of educational discourse. First, most conspicuously in the context of Aristotelian developmental and educational theory, phronesis is nothing less than the core ideal of what is nowadays named ‘character education’: namely, the *raison d’être* of such education once it has left the childhood stage. Yet Aristotle’s (1985) own reticence about when the transition to phronesis-

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guided education occurs and his platitudes about how it is best cultivated (through ‘teaching and experience’: Aristotle, 1985, p. 33 [1103a14–16], but what kind of teaching?, what sort of experience?) have turned the very idea of phronesis education into a paradox. For it seems that, according to Aristotle, the best way to prepare the student for the critical and reflective features of phronesis is through methods of moral habituation that are anything but critical and reflective (Peters, 1981). This paradox notwithstanding, phronesis continues to occupy a significant place in contemporary character education (Kristjánsson, 2015a)—most recently when it has been applied to engagement with online issues as ‘cyber-wisdom’ (Harrison, 2021).

Second, phronesis has come under renewed scrutiny recently within professional ethics in general (Schwartz & Sharpe, 2010), and the ethics of teaching in particular (Cooke & Carr, 2014), as the late twentieth-century obsession with formal rules and codes of conduct has abated and attention turned towards more intuitive, uncodified and tacit knowledge-driven strategies to negotiate dilemmatic space in classroom practice. However, just as within other professional domains, such as medicine (Kristjánsson, 2015b), the construct of phronesis at work in this discourse is anything but unified and consensual. In most cases it relies on a MacIntyrean conception of ‘practice’ (as the sphere in which phronesis is enacted) rather than Aristotle’s own notion of praxis.

The third educational discourse is also motivated by MacIntyre’s notion of ‘practice’ (although MacIntyre himself has, somewhat paradoxically, rejected the identification of teaching with a practice; see MacIntyre & Dunne, 2002). This discourse goes beyond the predication of phronesis upon the development of ethical virtues, either in students or teachers, and understands phronesis rather as a specific mode of uncodifiable contextual thinking *qua* intuitive artistry, represented in the activity of (good) teaching in general (Dunne, 1993).

All these three discourses, while educationally salient and enlightening from a practical classroom perspective (e.g. Harðarson, 2019), are hampered by the fact that—as Burbules puts it bluntly—there is little consensus on what phronesis really is (Burbules, 2019, p. 217). More specifically, one could identify the problem as being that of a concept without any agreed-upon conceptualisation (or conceptualisations, if we consider the three discourses above to target different conceptions of the concept). To be sure, there is no shortage of philosophical analyses of phronesis, especially within the confines of standard Aristotelian scholarship. Although many of those studies are nuanced and informative (especially Russell, 2009), they are typically not helpful in adapting the concept to the needs of social scientific (including educational) research, as they are not ‘operationalised’—to use a philosophically opprobrious term. The resulting lack of clarity and consensus is such that some researchers (e.g. McGrath, 2019) have concluded that we had better do without this concept: that it is redundant or replaceable with other less cumbersome constructs.

Help may be on the way, however, from the discipline of psychology. Recently, psychological interest in wisdom has proliferated—and not just in any kind of wisdom but rather in its ‘practical’ subset. A new ‘consensus model’ of practical wisdom by Grossmann *et al.* (2020) has already aroused considerable attention in psychological circles, and although it may not account fully for all the functions that neo-Aristotelians would want phronesis to fulfil, this model marks a watershed moment in the

social scientific study of practical wisdom. More closely aligned with the neo-Aristotelian tradition, some conceptual and empirical research on phronesis has been conducted recently with the aim of bringing Aristotle's original concept to bear on current issues in moral psychology (Darnell *et al.*, 2019) and to subject it to possible psychological measurements, for example through pre- and post-testing for gauging the effectiveness of educational interventions (Kristjánsson *et al.*, 2020).

These are exciting times for phronesis research, therefore, and many articles await writing up on the new conceptualisations. However, in the present article I take a different tack. Aristotle himself and a number of neo-Aristotelians have, during the course of history, made various empirical (especially developmental and educational) claims about phronesis. What characterises most of those claims is that they have barely, if at all, been substantiated empirically. Any viable educational research programme, based on one of the new conceptualisations that are being developed or some other model yet to see the light of day, must engage with these empirical claims to check whether they hold water. I propose, in the following three sections of this article, to tease out these claims in the form of empirical hypotheses that need to be tested, hence laying the foundations of an extensive educational research programme. The total number of hypotheses elicited is 22. Now, 22 is no magic number, and I admit that during the course of writing, many more came to mind. However, in order to keep the length of the article within reasonable limits, I decided to stick to 22.

Some of the hypotheses relate to all three of the educational discourses that I mentioned above. However, my focus here is almost entirely on the first discourse: the one that is most explicitly (neo-)Aristotelian. By that I am not saying that MacIntyre's and Dunne's phronesis discourses cannot count as 'neo-Aristotelian' also; indeed, MacIntyre considers any departures from Aristotle in *After virtue* as 'a strengthening rather than a weakening of the case for a generally Aristotelian standpoint' (MacIntyre, 1984, p. 197). Nevertheless, while the first discourse (within contemporary character education) mainly proposes to update Aristotle with new empirical findings, MacIntyre's notion of 'practice' (the sphere of phronesis) is more Hegelian (historically conditioned and sociological) than Aristotle's own, and less circumscribed to the venue of the standard ethical virtues (Kristjánsson, 2007, chapter 11; 2015b). Similarly, Dunne goes further in the direction of moral particularism and perspectivism than neo-Aristotelians within the first discourse would accept (Kristjánsson, 2007, chapter 11).

I deal with the 22 hypotheses in three distinct sections below. First, I explore various proposed components and correlates of phronesis; then, I turn to proposed variables that are more explicitly considered as precursors or determinants of phronesis; and finally, I look at hypotheses that have to do with the proposed cultivation of phronesis in informal or formal education. However, the distinction between these categories is porous (especially between the first and second, since no longitudinal studies of phronesis development exist)—and dividing the hypotheses between three sections is done more for the sake of exposition than to highlight crucial substantive differences.

After each hypothesis, I include an illustration of a scenario one would expect to encounter in real life if the hypothesis is warranted. I hope that these illustrations

escape Cigman's (2018) trenchant criticism of 'unpopulated' scenarios in educational discourse. The illustrations are not meant to carry any substantive argumentative weight of their own, but simply to exemplify the hypotheses with everyday examples. Finally, I offer some information about the theoretical provenance of each relevant hypothesis, although some of those serve mostly as received, but often implicit and unarticulated, assumptions undergirding the whole phronesis tradition, including and post-Aristotle.

This fairly unusual way of crafting an article for an education journal is meant to serve as a reminder that the remaining issues in the phronesis discourse(s) are not only theoretical or philosophical, but come with a host of practical assumptions and conjectures that call for empirical inquiry, above and beyond the completion of a coherent and plausible conceptualisation. What the phronesis discourse needs at present is more than just a new philosophical construct.

This article dives into the phronesis discourse at the deep end. It takes for granted that readers are already aware of some of the philosophical intricacies surrounding phronesis and their educational reverberations. A summary of all the relevant background literature would take up too much space here at the outset, not to mention a defence of a general character-based take on moral education. I recommend two recent articles as helpful entry points to some of the educational issues related to phronesis (Burbules, 2019; Harðarson, 2019).

Presumed components and correlates of phronesis

The latest conceptualisation of phronesis proposes that phronesis (as understood broadly by Aristotle himself but honed by some new insights from moral psychology) needs to fulfil four distinct but interrelated *functions*, and that those functions can be captured through a model with four *components* (Darnell *et al.*, 2019; Kristjánsson *et al.*, 2020). These functions can be termed a constitutive function (corresponding to what moral psychologists would call moral sensitivity); an integrative function (aka moral reasoning and adjudication); a blueprint function (aka moral identity, including relevant values and goals); and an emotion-regulation function (aka appropriate moral emotion). The nature of each function/component is elicited in Hypotheses 1–4 below, so I will not dwell on them here. It is worth noting, however, that (as can be seen in Figure 1), the components do not refer to psycho-moral capacities that are completely independent of one another and can be turned 'up' or 'down' in isolation. For example, the cultivation of moral sensitivity is likely to impact in various ways upon the capacity for moral reasoning about the situations identified with greater sensitivity. Nevertheless, a componential model correctly highlights the fact that an educational intervention may tap most specifically into one component while having less *direct* influence on the others—as exemplified at a later juncture in this article.

This model of phronesis faces a number of potential conceptual hurdles—the first of which would be to establish to what extent it improves upon Grossmann *et al.*'s (2020) new consensus model. However, rather than elaborating upon those theoretical issues here, let us focus on the fact that the Darnell *et al.* (2019) model incorporates a number of empirical hypotheses.

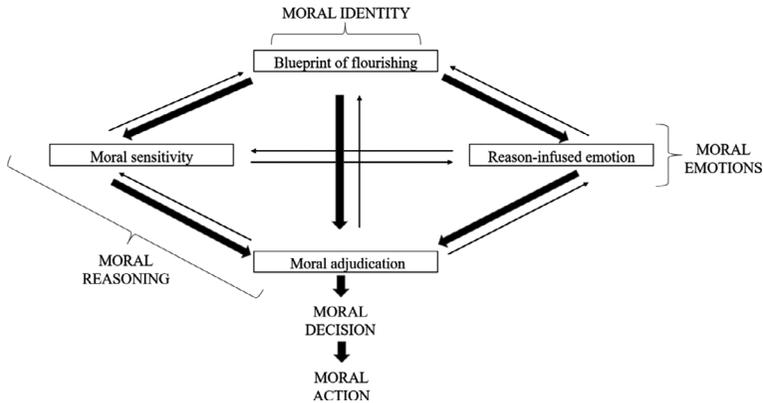


Figure 1. A neo-Aristotelian model of wise (phronetic) moral decision-making (based on Darnell *et al.*, 2019)

Hypothesis 1

There is individual variance in people’s capacity to perceive of situations as involving a moral quandary (e.g. a virtue conflict), and the level of perception influences the quality of the overall decision reached.

Illustration of Hypothesis 1. Amy is a kind-hearted person and wants to do good. However, her friends say she often fails to notice conflicts and controversies in her surroundings and describe her as walking through life with blinders on.

Provenance of Hypothesis 1. Aristotle himself does not explicitly define sensitivity as part of phronesis. However, he posits a subsidiary intellectual virtue of comprehension (*sunesis*), which is about grasping the essentials of a situation (Aristotle, 1985, p. 164 [1143a1–18]). Some Aristotelians might want to argue that seeing a situation as standing in need of phronetic deliberation is a necessary precursor of phronesis rather than part of the construct. However, structural equation modelling of data from a pilot study places this capacity within the rubric of phronesis (Kristjánsson *et al.*, 2020). One interesting question here is to what extent moral sensitivity can be enhanced simply via virtue literacy. For example, a young person might not perceive of the need for gratitude if she does not know what the term ‘gratitude’ means or implies. It would indeed be good news from an educational perspective if virtue literacy is a strong predictor of moral sensitivity, for virtue literacy is the form of virtue competence that seems easiest to develop (Davison *et al.*, 2016).

Hypothesis 2

There is individual variance in people’s capacity to reason about situations involving a moral quandary (e.g. a virtue conflict), and the level of reasoning capacity influences the quality of the overall decision reached.

Illustration of Hypothesis 2. Beth is a very compassionate and honest person and those virtues come naturally to her without much prior deliberation. However, when there is a conflict between them, she finds it difficult to reason her way out of the situation and often feels inadequate as a moral person.

Provenance of Hypothesis 2. There is not much need to justify this hypothesis as such. Its provenance is firmly in Aristotle's (1985) own theory of phronesis. Despite interpretative differences, all Aristotelians and neo-Aristotelians will agree that a core function of phronesis, *qua* meta-intellectual virtue, is to reason (reflect, deliberate, arbitrate) about what to do in complex situations, especially when virtues seem to collide (Russell, 2009).

Hypothesis 3

There is individual variance in people's possession of a blueprint of the flourishing life and of their identity as moral agents. This variance explains some of the quality of the overall decision reached.

Illustration of Hypothesis 3. Cecilia faces many tricky situations and choices in her life. However, rather than surrendering or avoiding difficult decisions, her strong sense of moral identity provides her with the motivational force to address these situations head-on and try to make the best of them.

Provenance of Hypothesis 3. This hypothesis opens up a can of worms in Aristotelian scholarship. What is uncontroversial is that Aristotle considered the phronetic agent to be in command of a clear conception of a flourishing life (*eudaimonia*). The exegetical literature on Aristotle typically refers to this conception as a 'blueprint' of the good life, and that term is adopted in the Darnell *et al.* (2019) model. However, 'blueprint' may not be a felicitous term because of its connotation of something as specific as an engineer's plan, where everything is pre-specified and codifiable. The flourishing conception is more flexible than that and is better described as a person's principal ethical orientation; hence, the similarity to what moral psychologists call 'moral identity'. In any case, the extent to which this conception enters into the motivational process involving phronesis is open to debate. An alternative would be to argue that phronesis needs no motivation of its own, with its motivational powers (as a meta-virtue) all stemming from the lower-level moral virtues that it synthesises. However, Hypothesis 3 relies on a well-known interpretation by Irwin (1975) of Aristotle as distinctively non-Humean about moral motivation. While psychologists tend to be cagey about incorporating any comprehensive normative assumptions into their specifications, it is worth noting that Grossmann *et al.*'s (2020) model of (practical) wisdom would accommodate Hypothesis 3, as being about what they call the 'moral aspirations' inherent in the construct. Notably, when Aristotelians talk about a developed blueprint of the good life or a strong moral identity, they assume—in accordance with their moral realism—that the substance of the relevant identity tracks 'real' moral truths, and that (say, a Hitleresque) strong evil 'moral identity' is bound to be internally inconsistent (Aristotle, 1985, p. 247 [1166b11–26]) and hence undermine

coherent, integrative decision-making. However, this assumption is not a conceptual truth, so we must accept that there is another deeper empirical hypothesis underlying Hypothesis 3.

Hypothesis 4

There is individual variance in people's capacity to regulate their emotions and 'moralise' them by infusing them with reason. This variance explains some of the quality of the overall decision reached.

Illustration of Hypothesis 4. Diana is usually very good at figuring out what to do in tricky situations. However, sometimes she becomes so angry over what she perceives as a personal insult that her capacity to reason fairly is compromised.

Provenance of Hypothesis 4. One of the most distinctive features of Aristotle's virtue theory is the assumption that emotional dispositions (just as action dispositions) can be exhibited 'at the right times, about the right things, towards the right people, for the right end and in the right way' (Aristotle, 1985, p. 44 [1106b17–35]). They can therefore be evaluated for their level of reasonableness (or proper reason-infusion). If a relevant emotion is 'too intense or slack' for its present object, we are badly off in relation to it, but if it is fitting to the object, we are 'well off' (Aristotle, 1985, p. 41 [1105b26–28]). While the illustration above refers to a case of 'too intense' emotion blocking the phronetic process, an alternative case could involve an emotion that is 'too slack' for the context: for example, not enough reasonable anger being experienced. While these assumptions about 'virtuous emotions' are uncontroversial from an Aristotelian perspective, there might be a case for considering emotion regulation to operate external to *phronesis*: enabling it rather than being part of it. For instance, this component does not figure in Grossmann *et al.*'s (2020) model of (practical) wisdom. This is therefore a hypothesis that needs to be tested further.

Hypothesis 5

Apart from the individual variance in the four specific components, there is also variance in the overall possession of *phronesis*, and it is a scalar concept.

Illustration of Hypothesis 5. Emily is generally considered a wise and reliable person who makes good moral decisions. However, she is still liable to the occasional error and feels that in at least 25% of difficult cases, she does not get things quite right.

Provenance of Hypothesis 5. This hypothesis may seem unnecessary, for if there is individual variance in the components of *phronesis* (between individuals and within the same individual, depending *inter alia* on age and experience), then surely the same will apply to the construct as a whole. However, this hypothesis is needed because of some odd remarks Aristotle himself makes about how *phronesis* secures the unity of the virtues. Aristotle thus says that when one has *phronesis*, one has 'all the [moral] virtues as well' (Aristotle, 1985, p. 171 [1145a1–3]). This has given rise to the

interpretation that, for Aristotle, *phronesis* is an all-or-nothing affair: either one is a fully fledged *phronimos* with all the moral virtues secured, or one does not possess *phronesis* at all. While it is plausible to consider *phronesis* to develop over one's character as a whole, in a holistic way, neo-Aristotelians tend to depart from this strict reading and see it as one of many examples of Aristotle falling prey to his mentor Plato's habit of defining concepts with respect to their idealised realisations. On a standard neo-Aristotelian understanding, in contrast, then, *phronesis* (just like the moral virtues) represents a scalar, developmental concept (Fowers *et al.*, 2021). This is why most of the salient discourses about *phronesis* are, in fact, educational discourses.

Hypothesis 6

The construct of *phronesis* predicts virtuous action above and beyond the predictive power of the four components.

Illustration of Hypothesis 6. Fiona's decision-making used to be quite compartmentalised; sometimes she would rely on her moral intuition, sometimes on her reasoning. After she tried to reflect and work more holistically on her moral make-up and how it steers her actions, she feels she is more satisfied with her moral choices.

Provenance of Hypothesis 6. We know from well-established results in empirical moral psychology that the variables of moral reasoning, moral emotion and moral identity each explain variance in moral decision-making to a maximum of 20% (see various references in Darnell *et al.*, 2019). The hope is that the *phronesis* construct carries incremental validity in predicting moral action; otherwise, it could not be considered to integrate synergistically (as distinct from simply to aggregate) the individual components. While the findings from an initial pilot study show promise in this regard (Kristjánsson *et al.*, 2020), more empirical research is needed to confirm this hypothesis, in particular educational research studying changes in decision-making before and after an intervention.

Hypothesis 7

Phronetic decisions will sometimes coincide with prosocial decisions but sometimes not.

Illustration of Hypothesis 7. Gemma has a keen sense of what is the right thing to do in difficult situations and usually turns it into action. However, she finds that in some cases her well-considered decisions do not have good consequences for the agents involved.

Provenance of Hypothesis 7. Many contemporary ethical and moral-educational writings are couched in the language of 'prosociality'. However, prosociality is a behaviouristic and fairly crude utilitarian concept that is alien to the spirit of Aristotelian *phronesis* (Fowers *et al.*, 2021). Gemma could engage in prosocial decision-making by, say, following uncritically the judgements of an authority figure who

happens to be wise. However, Gemma would, in such cases, not be exercising her phronesis. Conversely, Gemma could take fully phronetic decisions that happened to make everyone around her unhappy, at least in the short run. In general, phronesis is not about the quality of a behaviour–effect combination, but about the quality of a reason–action combination (which is not to say that the predicted effects of the action do not feed into the reasoned deliberation). It might be complained here that Hypothesis 7 is not really an empirical hypothesis, but simply a conceptual claim in disguise. We need to be aware of the mistake of conflating the two (Smedslund, 1991), and I return to that issue in the concluding section. However, as prosociality is typically explored behaviouristically, I see no barriers to testing when a decision has prosocial consequences and to what extent such decisions tend to overlap with ones that fulfil the above four functions of phronesis.

Another take on this hypothesis would be to check whether people agree with it or not. It might be a fairly bitter pill for some teachers to swallow, for example, to accept that some decisions to which they would be guiding students in moral education might not have positive social consequences (at least not for the immediate group of people involved). Although MacIntyre (1998) is probably right that the modern ‘plain person’ in the street thinks about morality more as an Aristotelian than a Kantian, there is also a strong utilitarian streak in modern thinking which understands the goodness of decisions in terms of the maximisation of good consequences rather than the advanced, integrated exercise of reflective virtue.

Hypothesis 8

The development of phronesis takes off in late adolescence/early adulthood.

Illustration of Hypothesis 8. Holly was a nice, well-behaved child who modelled herself on her parents, older siblings and teachers. However, as a teenager, she felt an urge to revisit and re-evaluate the moral tenets with which she had been inculcated and to create her own moral identity.

Provenance of Hypothesis 8. Aristotle says that ‘the young’ cannot develop phronesis, as they lack the relevant experience (Aristotle, 1985, p. 160 [1142a12–16]). He does not indicate, however, how young is young, or when exactly phronesis begins to develop. Combining Aristotle’s insights with modern knowledge about the development of adult integrative (metacognitive) thinking and identity formation (Kallio, 2020), most neo-Aristotelian theorists assume that phronesis development takes off in (late) adolescence to early adulthood. However, much more research is needed to confirm that hypothesis. Indeed, this may be one of the least plausible of the Aristotelian and neo-Aristotelian hypotheses under scrutiny here. There is, for example, considerable psychological evidence indicating that adolescents can reason about risk-taking dilemmas as effectively as adults from early adolescence. Generally, the current evidence indicates steep metacognitive development from early adolescence to late adolescence and then a gradual plateauing (Weil *et al.*, 2013).

Hypothesis 9

The earlier that the foundations of phronesis are laid in childhood, the better for its future development.

Illustration of Hypothesis 9. Even when Isabel was too young to comprehend moral reasons, her parents used to give her reasons for every request or order. When she became a teenager, Isabel excelled over many of her peers in reasoning about moral issues.

Provenance of Hypothesis 9. This hypothesis departs substantially from standard ‘originalist’ exegeses of Aristotle, according to which he considered the phases of early virtue-trait habituation and later phronesis formation as fully separate (Burnyeat, 1980). Many neo-Aristotelians lean more towards Sherman’s (1989) interpretation, according to which reason-responsiveness should ideally be cultivated from early childhood, through exposure to reasons and arguments. This Shermanian neo-Aristotelian hypothesis carries the additional benefit of dissolving Peters’s (1981) earlier-mentioned ‘paradox of moral education’. However, at the moment, empirical data to confirm or disconfirm this hypothesis is mostly non-existent so, for the time being, it counts as a mere exercise in armchair developmental psychology.

Hypothesis 10

A non-virtue-friendly ethos, for instance one steeped in rules, codes and regulations, can hinder the development and execution of phronesis.

Illustration of Hypothesis 10. Jennifer got interested in professional phronesis during her teacher training. However, after a few years working as a teacher, Jennifer feels that her phronesis has taken a back seat and is being constantly challenged by a standards-driven workplace culture.

Provenance of Hypothesis 10. This was not a specific concern for Aristotle himself—apart from a more general threat to virtue and phronesis development that he identified in adverse social circumstances (see Hypothesis 15 below). However, this hypothesis is often raised by contemporary advocates of phronesis in professional contexts, and they have provided some evidence to support it (Schwartz & Sharpe, 2010). Harðarson’s (2019) recent piece on teachers’ phronesis (or lack thereof) is an extended variation on this theme.

Hypothesis 11

Phronesis correlates with both subjective and objective well-being: that is, with both happiness and flourishing in Aristotle’s sense.

Illustration of Hypothesis 11. Kate made an effort to hone her moral decision-making skills and attended a couple of CPD courses about phronesis and character. She now feels more satisfied with her life in general.

Provenance of Hypothesis 11. Flourishing is obviously the ungrounded grounder of all human endeavours in Aristotle (1985), and subjective well-being tends to occupy a similar place in contemporary psychology. The importance of finding correlations between phronesis and well-being can, therefore, not be over-estimated. Fairly abundant research already exists on correlations between moral virtue(s) and well-being (Fowers *et al.*, 2021; see their own hypotheses 14–16 about virtues). However, similar research is needed about phronesis.

Presumed determinants of phronesis

After exploring various hypotheses about the components of phronesis and its presumed correlates, it is time to take a step back and look at some more explicit Aristotelian and neo-Aristotelian hypotheses about the determinants of phronesis. Many of those simply coincide with the determinants of (moral) virtue in general, but they are still worth rehearsing here because of the close relationship between phronesis and the moral virtues: the former cannot exist without the latter and the latter can only exist without phronesis in a developmentally rudimentary form (as mere habituated virtues).

Hypothesis 12

How *phronesis* develops and how (well) it functions depends partly on individual constitution.

Illustration of Hypothesis 12. Lily is strong on the personality trait of agreeableness. When she faces a conflict between compassion and honesty, her phronesis guides her more towards honest compassion than compassionate honesty.

Provenance of Hypothesis 12. Aristotle obviously did not know, as we do today, about our mostly genetically constituted (especially Big Five) personality traits and how these amoral traits may partly condition the formation of moral character qualities (Kristjánsson, 2013, chapter 3). However, this current knowledge is fully in line with Aristotle's own strong emphasis on the individualisation of virtue, which is fairly unique historically in character-education theory. For example, according to Aristotle, temperance in eating is not the same for Milo the Olympic athlete as for the novice athlete, because what is intermediate in virtue is relative to the individual, 'not in the object' (Aristotle, 1985, p. 43 [1106b1–7]). And, from an educational perspective, a boxing instructor will not 'impose the same way of fighting on everyone' (Aristotle, 1985, p. 295 [1180b9–11]). Thus, it is not a concession from an Aristotelian perspective to admit that honesty will come more naturally to a person with a strong personality trait of conscientiousness but compassion to a person who is strong on agreeableness (like Lily). More than that, what counts as a phronetic decision for Lily will be relative to her individuality, as virtue is in the specific person, not in 'the object'. This hypothesis obviously has dramatic implications for the idea of character education in schools, as such education then needs to be tailored to the individual constitution of each student.

Hypothesis 13

What counts as a phronetic decision depends on developmental level.

Illustration of Hypothesis 13. Martha used to rely a lot on the judgement of her best friends to help her reason well when she was a first-year student at university. Later she felt more capable of making sound decisions on her own.

Provenance of Hypothesis 13. This hypothesis is a direct implication of the developmental strand that permeates the whole Aristotelian corpus and of his insistence on how different virtues and virtue constellations characterise different phases of one's life—coupled with Hypothesis 5, on phronesis as a scalar concept. More specifically, Aristotle seems to believe that in early adulthood, people need to rely strongly on their 'character friends' in order to reason wisely (namely, for honing and executing their phronesis), while this need will diminish with greater experience (Aristotle, 1985, pp. 266, 208 [1172a11–14, 1155a15–16]).

Hypothesis 14

What counts as a phronetic decision will depend considerably on culture and social position.

Illustration of Hypothesis 14. Nicky inherited a fortune and realised that in order to remain generous, her new social position called for lavish public benefaction.

Provenance of Hypothesis 14. This hypothesis is most conspicuously brought out in Aristotle's discussion of the unique position of the great-hearted people: the *megalopsychoi*, blessed with abundant resources. What phronesis will dictate regarding the overall balance of virtue for the *megalopsychoi* (think of Bill Gates in the modern world) is drastically different from the balance for an ordinary *phronimos* with few material resources (Aristotle, 1985, pp. 97–104 [1123a34–1125a35]). Different cultural expectations and norms will also presumably play a role here.

Hypothesis 15

The development and exhibition of phronesis is partly dependent on positive social circumstances and hence on 'moral luck'.

Illustration of Hypothesis 15. Olga used to be a morally astute person and took pride in making reflective and considered decisions. However, after she was convicted by an evil regime for a crime she did not commit, she found that her standing as a *phronimos* was hopelessly compromised.

Provenance of Hypothesis 15. Aristotle's insistence on the need for certain (especially socio-political) external circumstances for the development and sustenance

of one's virtue make-up is fairly unique—setting his theory apart, for instance, from the assumption that one finds in theorists as distinct as Socrates, Buddha, Confucius and the Stoics that virtue is sovereign in the sense that nothing can harm the good person. Aristotle has nothing but scorn for this view, saying that those who maintain that we can flourish 'when we are broken on the wheel, or fall into terrible misfortunes, provided that we are good [...] are talking nonsense' (Aristotle, 1985, p. 203 [1153b19–21]). This view, as well as Aristotle's claim that phronesis requires civic virtues, not only (personal) moral ones, distinguishes his form of virtue theory and character education from more individualistic varieties that mostly eschew socio-political contexts. It is therefore odd to see Burbules question 'the profound individualism of Aristotle's conception of virtue' (Burbules, 2019, p. 134), unless Burbules's term 'individualism' here refers to Aristotle's theory of the individualisation of virtue (recall Hypothesis 12). However, most moderns would consider Hypothesis 12 a strength, rather than a weakness, in Aristotle's theory.

Hypothesis 16

Phronesis is partly learned through teaching.

Illustration of Hypothesis 16. Patricia decided to enrol in a course on Aristotle's theory. Afterwards, she found that her ability to make good moral decisions had improved.

Provenance of Hypothesis 16. This hypothesis is simply based on Aristotle's claim that, distinct from the moral virtues which are (originally) learned through habituation, the intellectual virtues (including phronesis) grow from teaching and experience (Aristotle, 1985, p. 33 [1103a14–16]). The problem is that Aristotle does not tell us what sort of teaching is required; and this hypothesis thus clearly needs to be fleshed out with specifics before it can be made testable. I mention some sub-hypotheses about phronesis teaching strategies in the following section.

Hypothesis 17

The motivation to engage in phronetic deliberation will depend on both the strengths of external moral virtues and the internal strength of the blueprint component: the desire to lead a flourishing life.

Illustration of Hypothesis 17. Quincy often feels overwhelmed with strong feelings of gratitude and compassion. However, she lacks a strong enough sense of moral identity to know how to balance her life well.

Provenance of Hypothesis 17. Aristotle does not tell us much about the motivational forces driving phronesis, so this hypothesis is simply a corollary of Hypothesis 3, based on Irwin's (1975) interpretation.

Hypothesis 18

Phronesis can be jeopardised by a lack of performance virtues to execute its functions.

Illustration of Hypothesis 18. Reece is blessed with powerful moral virtues and well-developed phronesis capacities. However, lacking in resilience—the capacity to bounce back from negative experiences—she often fails to act on her capacities.

Provenance of Hypothesis 18. In contemporary character education, performance virtues are typically listed as a discrete category, alongside moral, civic and intellectual ones: namely virtues such as resilience, grit and self-confidence. Indeed, performance virtues seem to be the primary ones targeted in some popular modern versions of character education (e.g. Tough, 2013; Duckworth, 2016), much to the chagrin of those who think this focus instrumentalises and demoralises character education overly (Kristjánsson, 2015a). Aristotle would probably not have considered the performance virtues as virtues at all, but rather as executive skills (*techné*), although he did reserve one moral virtue, namely courage, for the task that the performative ones are typically meant to perform in current theories. Despite their spurious Aristotelian provenance, performance virtues have become part and parcel of what counts as neo-Aristotelian character education in the present age (Jubilee Centre, 2017); and it would be a misrepresentation to leave them out of potential hypotheses about phronesis that await confirmation or disconfirmation.

Notice that Hypothesis 18 is about the compromised functionality of well-developed capacities for phronesis because of, say, lack of resilience. However, this hypothesis is typically extended to the capacity to *act on* one's phronetic decisions: turn them into virtuous conduct. But in that form the hypothesis would take us beyond the remit of this article, because there are many perfectly valid reasons for a reduced ability to practise what one has decided is right: for example, various forms of bad health and disabilities. The fully phronetic person cannot always act rightly.

Presumed educational strategies and evaluations

Given the recent surge of interest in character education, one would expect to find a plethora of educational studies exploring phronesis interventions. However, that is not the case. Many times more articles seem to have been written, for instance, about cultivating the virtue of gratitude: a warm and cosy virtue, to be sure, but clearly lacking in the integrative meta-status of phronesis and also more educationally problematic than it is often made out to be (Morgan *et al.*, 2015). A literature search only unearthed one book on general wisdom interventions (Ferrari & Potworowski, 2010) and none on phronesis education in particular. A 2020 special issue of the *Journal of Moral Education* notwithstanding, individual research articles are also sparse and disparate, and meta-analyses are non-existent. It says a lot about the current state of play that the fairly brisk overview by Grossmann *et al.* (2020, pp. 117–119) is probably the best place to begin for researchers wanting to gain a comprehensive view of what has been done in this area.

I can offer nothing but guesses about this lacuna. One reason could be that the majority of existent character-education interventions are geared towards students who have not yet reached late adolescence or early adulthood: the presumed core age for phronesis development (according to Hypothesis 8). Another reason would have to do with the sheer complexity and synthetic nature of phronesis, and the fact that until recently no operationalisable conceptualisation existed. I add a third possible reason in the concluding section. The recently developed neo-Aristotelian four-componential phronesis model (Darnell *et al.*, 2019) offers a way out of this impasse, as it enables us to gear interventions towards specific components and thus cultivate phronesis plank by plank, rather than aiming for a comprehensive educational intervention that develops all the planks simultaneously (cf. Fowers *et al.*, 2021; especially their hypotheses 23 and 24).

Hypothesis 19

Phronesis is best developed through a battery of interventions that target its different components.

Illustration of Hypothesis 19. Sophie found that while reading about her role models, like Martin Luther King and Nelson Mandela, helped her develop her moral identity, engaging with her best friends was more useful in helping her regulate her strong emotions.

Provenance of Hypothesis 19. I have complained twice already about Aristotle's reticence regarding the nuts and bolts of phronesis cultivation. However, he does suggest a number of different strategies for virtue development more generally, and neo-Aristotelians have added considerably to that mix. Let me just mention some of those strategies and how they could possibly be hypothesised to target one or more of the components of phronesis in the Darnell *et al.* (2019) model. Consider those tentatively as four sub-hypotheses of Hypothesis 19: (1) moral identity is best developed through exposure to art/literature, role models and direct teaching; (2) moral sensitivity is best developed through exposure to moral quandaries and via service learning; (3) moral emotions are best developed through engagement with character friends, moral quandaries and music; (4) moral reasoning is best developed through grappling with moral quandaries, learning from mentors and character friends. It must be admitted that those sub-hypotheses have little else to recommend them at this stage than their (presumed) intuitive appeal. They are not as well grounded in the background literature as most of the main hypotheses above. Justifying each of them individually would take up too much space, so I present them here simply as food for thought.

Educational interventions are not credible unless there are some ways to evaluate their effectiveness. So far, evaluations of character and virtue have been the elephant in the room in most research on character education, but a new book acts as a real game-changer in the field and even includes an extensive discussion of how to measure phronesis development—although most of the discussion is conducted at a level of abstraction above that of providing practical advice about specific measures, new or off-the-shelf (Wright *et al.*, 2021; especially chapter 5).

Hypothesis 20

Phronesis evaluations lend themselves particularly badly to self-reports.

Illustration of Hypothesis 20. Tina took the values in action (VIA) test of character strengths, and she showed the results to her best friend who found them realistic. When Tina concluded that she must be good at making decisions, given how high her VIA scores were, her friend was more sceptical.

Provenance of Hypothesis 20. Character educationists have long been wary of self-report tests, like the VIA, because of people's lack of self-transparency and access to their 'real selves' (Kristjánsson, 2015a, chapter 3; Wright *et al.*, 2021). The VIA test, grounded in Peterson and Seligman's (2004) positive psychological virtue theory, makes do without any meta-virtue like phronesis (although it includes 'judgement' and 'perspective' as ordinary non-meta-virtues). However, even if there were a meta-virtue of phronesis in positive psychology, its componential nature would presumably make it even more difficult to self-assess overall than an individual virtue such as gratitude.

Hypothesis 21

Phronesis evaluations need to focus on actual first-person decision-making rather than merely third-person hypothetical decision-making.

Illustration of Hypothesis 21. Ursula is good at figuring out what other people should do in tricky situations, but she is bad at making decisions about her own messy life, even if the relevant situations seem to be similar.

Provenance of Hypothesis 21. We know from an overview of previous research (Grossmann *et al.*, 2020) that people are generally better at making wise judgements in the third person rather than the first person. This may provide an impetus to craft interventions that, in the first instance, target judgements about other people. However, eventually, what we want to cultivate and evaluate is the person's ability to make wise, authentic and autonomous choices about their own life.

Hypothesis 22

What matters for the effectiveness of a phronesis intervention is not so much the progress made in a post-test right after the intervention, but the long-term benefits of the intervention.

Illustration of Hypothesis 22. Vicky made good progress after a phronesis intervention in her teacher training, according to a post-test. However, when the test was repeated 6 months later, the progress had petered out.

Provenance of Hypothesis 22. Most character-education interventions are short-term and longitudinal studies are sparse (Berkowitz & Bier, 2006). If this is a problem with

regard to the cultivation and evaluation of individual virtues, it must be even more so in the case of a meta-virtue like phronesis, whose very nature is to be holistic and integrative and latch itself onto the individual's complete characterological make-up.

Concluding remarks

The salience of the intellectual meta-virtue of phronesis for any Aristotelian or quasi-Aristotelian programme of character education can hardly be over-estimated. It must form the lynchpin of any sound, holistic programme that aims to target such education for older adolescents or budding professionals. For instance, no decent programme of professional ethics in teacher training could—from a neo-Aristotelian perspective—pass muster without primary attention being paid to phronesis (cf. Harðarson, 2019). It should already be clear to readers, therefore, how crucial the hypotheses explored in this article are for at least the first two educational discourses identified in the Introduction—and indeed also for the third one if we follow MacIntyre (1984) and much of the medical-ethics literature on phronesis (Kristjánsson, 2015b) in extending the domain of phronesis, as a mode of thinking, beyond the narrowly moral or characterological.

The concern motivating the present article has not been with the absence of phronesis from educational discourses, for it is a frequent topic of theoretical discussions there already. The worry is rather that this theoretical interest has so far not been translated into empirical research; hence my decision to submit this article to a journal that is equally interested in theoretical and empirical studies. The new conceptualisation of phronesis (Darnell *et al.*, 2019) affords an unsurpassed opportunity to conduct systematic research in schools and universities on how phronesis can best be cultivated and how the fruits of that cultivation can be measured. I hope the 22 hypotheses provisionally offered here as an entry point to empirical research will prompt some readers to adopt a practical phronesis lens in their educational research.

Not all of that proposed research would need to be *primary* research. Some of it could simply aim at distilling findings from already existing sources and bringing them to bear on phronesis. Here is namely the third possible reason, promised earlier, for the absence of phronesis from empirical educational research agendas. A lot of research already exists, under other designations, that is actually about what Aristotle called 'phronesis' (or at least crucial components of it), either indirectly or directly. I am thinking here of research about metacognitions, Piagetian post-formal thinking, self-reflection, social reasoning, professional expertise, tacit knowledge and various other related topics (cf. Kallio, 2020). For instance, when I reviewed precedents for a phronesis intervention for secondary-school students, the most useful example was an intervention by Lin *et al.* (2019) to enhance what they call 'social reasoning'. The trick here is not to reinvent the wheel but try to build on what other researchers have done in overlapping areas. It may well be that many of the hypotheses proposed above have already been tested inadvertently by researchers who were overtly investigating something else. After that distillation work is done, the next step is to look at the remaining untested hypotheses and address them one by one.

I am aware of the potential complaint that some of my supposedly empirical hypotheses are simply conceptual claims in disguise. It could be argued, for example,

that Hypothesis 7 is about the meaning of the word ‘prosocial’ rather than any anticipated empirical findings about the results of phronetic decisions not always being prosocial. This error is not only frequently committed by philosophers posing as social scientists, but also by social scientists themselves. Smedslund (1991) thus argues convincingly that some of the most formidable psychological theories in the twentieth century were what he calls ‘pseudo-empirical’—which does not necessarily detract from their academic value but does change considerably the ways in which we would want to substantiate them.

While endorsing Smedslund’s insight, I am not as worried as he is about this ‘error’. Just as with the proverbial ‘fact–value’ distinction, the line between ‘theory’ and ‘practice’ is often thinner than is normally acknowledged. The phronesis construct occupies an unusual role vis-à-vis this dividing line. It is a theoretical construct, but one whose natural habitat is in practice. For MacIntyre (1984), phronesis is nothing less than the ideal characteristic mode of thinking within any ‘practice’. It would be a mistake to fail to subject such a construct to serious empirical inquiry and just rest content with treating it as a philosophical plaything.

Ethical approval

Ethical approval was not required for the present study.

Conflict of interest

The author reports no conflict of interest.

Data availability statement

Data sharing is not applicable to this article as no empirical datasets were generated or analysed during the current study.

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