Abstract

According to Aristotle, moral virtue is a stable disposition to decide correctly, and a decision (prohairesis) results from deliberation (bouleusis) about how to realize an end. Practical intuition (nous) is also necessary for virtuous activity, but unlike deliberation it is not capable of directing virtuous activity. Recent psychological research on intuitive and deliberative forms of thinking provides evidence that intuition is more effective than deliberation at directing action in many cases, in particular complex cases in which a large number of factors are relevant to choice. This research poses a potential problem for Aristotle’s account, if Aristotle indeed requires deliberation before every virtuous activity token, since the requirement for deliberation seems arbitrary if intuition is a more effective discovery procedure, and since it may then be difficult or impossible for humans to engage in virtuous activity. There are at least two plausible responses to this potential problem available to an Aristotelian: one is to insist that every virtuous activity token requires prior deliberation, even if this makes it difficult for humans to realize virtue; another is to weaken the requirement that every virtuous activity token require prior deliberation.
1. Introduction

Cognitive psychologists have often emphasized the limitations of intuitive forms of thinking. It is well known that intuitive thinking is prone to biases of various kinds, such as confirmation bias and the framing effect. More recently, some cognitive psychologists, including Daniel Kahneman, a pioneer of the study of heuristics and biases, have begun to place greater emphasis on the strengths of intuitive thinking. Surprisingly, some studies show that intuitive thinking is more effective than deliberative thinking in forming decisions in complex situations. There is also research which suggests that experts characteristically make use of intuition, and not formal decision procedures, when making decisions. Moral philosophers, by contrast, have tended to emphasize the importance of rational deliberation when agents are called upon to make moral decisions. Though Aristotle’s account offers no formal procedure for making correct moral decisions, rational deliberation does play an important part in his account of virtuous activity, since an agent must deliberate correctly in order to discover the virtuous course of action. If virtue is relevantly similar to other forms of expertise, then we would expect intuition to play an important role in virtuous activity, and Aristotle’s theory may be in a better position than its rivals when taking into account the role of intuition in the formation of moral decisions, since on his account practical intuition (nous) is necessary to grasp the particulars relevant to action. However, Aristotle seems to require that virtuous activity be directed by

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5 This is most clearly seen in those consequentialist and deontological theories which endorse a rationally formulated decision procedure, such as the principle of utility or the categorical imperative.
rational deliberation, not practical intuition, and this requirement seems arbitrary if intuition is a more effective discovery procedure; moreover, if humans are unable to use deliberation as a discovery procedure in many cases of moral decision, then it may be difficult or impossible for them to engage in virtuous activity. At least two responses to this potential problem are open to a defender of Aristotle. First, since virtue is a normative concept, empirical claims about human capacities do not themselves render an account of virtue inadequate. Second, the requirement that every virtuous activity token be directed by rational deliberation may be weakened in at least two ways, such as by only requiring deliberation before virtuous activity as a type, or by requiring only a deliberative conceptual structure for each virtuous activity token.

2. Aristotle on Deliberation and Intuition in Virtuous Activity

For Aristotle, a virtuous person possesses both complete moral virtue and complete intellectual virtue. Moral virtues are excellences of the non-rational part of the soul, and intellectual virtues are excellences of the rational part of the soul. Specifically, moral virtues are excellences of the part of the non-rational part of the soul associated with feeling, which is the part of the non-rational part of the soul which participates in reason, and is capable of being ruled by reason. Aristotle defines moral virtue as “a state that decides, consisting in a mean, the mean relative to us, which is defined by reference to reason, that is to say, to the reason by reference to which the prudent person would define it.” Moral virtue is a state (*hexis*), that is, a stable disposition of character to act or feel in a certain way. Specifically, moral virtue is a stable disposition to decide in a way that is rationally justified given the ends of the agent, the

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7 *NE* II.3 1104b.
8 *NE* I.13 1102b.
9 *NE* II.6 1107a1-3.
capacities of the agent, and the particular circumstances in which the agent acts. Each particular moral virtue is an excellent (mean-hitting) disposition related to a different kind of action or passion. Courage, for example, is the excellent disposition of character related to fear and confidence, while temperance is the excellent disposition of character related to pleasure and pain. Morally virtuous activity is the exercise (energeia) of the state of moral virtue, and partially constitutes the happiness or flourishing (eudaimonia) of a virtuous agent.

The decisions of a virtuous agent succeed in hitting a mean between excess and deficiency with respect to a certain action or passion. For Aristotle, a decision (prohairesis) is a desire to perform an action which results from deliberation. Deliberation (bouleusis), meanwhile, is reasoning about how to realize an end through action (and is not reasoning about the end):

As we have said, then, a human being would seem to be the principle of action; deliberation is about the actions he can do; and actions are for the sake of other things; hence we deliberate about what promotes an end, not about the end.

Aristotle gives the following examples of deliberation: a doctor deliberating about how to cure; an orator deliberating about how to persuade; a politician deliberating about how to produce good order. In these examples, it seems clear that the agent’s end is not the object of deliberation, but is rather presupposed by deliberation. Deliberation either takes the form of or results in a practical syllogism, the conclusion of which is a prescription for action. Excellence in deliberation is part of practical wisdom (phronesis), an intellectual virtue which, together with moral virtue, makes the good life possible: “we fulfill our function insofar as we have phronesis

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10 NE II.7 1107b.
11 NE II.6-7.
12 NE III.3 1113a10-14.
13 NE III.3 1112b.
14 NE III.3 1112b12-15.
and virtue of character; for virtue makes the goal correct, and *phronesis* makes the things promoting the goal [correct].”  

Moral virtue directs the agent toward the correct goal or end of action, while practical wisdom enables the agent to decide on the correct action for promoting the goal, through engaging in correct deliberation.\(^{17}\)

Despite Aristotle’s seemingly direct statement that deliberation is about means, and not about ends, there is a long-standing debate among interpreters of Aristotle about whether deliberation can also be about ends—whether about a general end, or about what constitutes a general end in a particular situation.\(^{18}\) On either interpretation, though, deliberation is still required for virtuous activity; indeed, the close connection between deliberation and moral virtue is evident in Aristotle’s very definition of moral virtue. Moral virtue is “a state that decides,” and decision, for Aristotle, results from deliberation. The exercise of every moral virtue necessarily involves deliberation, because deliberation is required to determine how to promote the end provided by moral virtue.\(^{19}\)

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\(^{16}\) *NE* VI.12 1144a7-9. The translation is Irwin’s, but I have replaced instances of the term ‘prudence’ in his translation with ‘*phronesis*’.

\(^{17}\) Regarding deliberation being about what promotes ends, and not about ends themselves, cf. III.2 1111b26-27: “we wish for the end more [than for the things that promote it], but we decide on things that promote the end,” and III.3 1112b11-12: “We deliberate not about ends, but about what promotes ends.”

\(^{18}\) Terence Irwin’s translation of the Greek phrase *ta pros* in the aforementioned passage as ‘the things promoting’ suggests the former, instrumentalist interpretation of Aristotle. But, as many scholars have pointed out, a more literal translation of the phrase *ta pros* is ‘the things towards’, which some have argued leaves it open as to whether practical wisdom also includes excellence in specifying ends, through the selection of actions which are intrinsically valuable. For an example of the non-instrumentalist interpretation of Aristotle, see John McDowell, “Some Issues in Aristotle’s Moral Psychology,” in *Mind Value, and Reality* (Cambridge, Massachusetts: Harvard University Press, 1998), 25. For a recent, trenchant critique of the view that Aristotle countenances deliberation about ends, see Jessica Moss, “‘Virtue Makes the Goal Right’: Virtue and *Phronesis* in Aristotle’s Ethics,” *Phronesis* 56 (2011): 204-261.

\(^{19}\) Some scholars, such as John McDowell, have resisted interpreting Aristotle as holding the view that virtuous activity essentially involves deliberation (op. cit., 23-24); McDowell’s interpretation will be discussed briefly in section 4, below, as it provides a potential response to the problem introduced in section 3.
Aristotle maintains that practical intuition (nous) is also necessary for virtuous activity. Aristotle’s term nous is often translated as ‘intellect’ or ‘understanding,’ but, when it is contrasted with forms of discursive thinking (dianoia), such as deliberation, it is better translated as ‘intuition’ or ‘insight’. Aristotle uses the term ‘nous’ in both practical and theoretical contexts. Both practical and theoretical nous are rational faculties, but they operate through directly grasping their objects, and not through discursive thinking. Theoretical nous admits of two kinds: one which grasps the nature of simple forms, for which there is no account; and another which grasps the first principles of a science, for which there is no proof. Like theoretical nous, practical nous is a non-discursive faculty, but instead of grasping first principles or the nature of simples, it grasps the particulars of a situation that are relevant to action:

Nous is also concerned with the last things, and in both directions. For there is nous, not a rational account, both about the first terms and about the last. In demonstrations nous is about the unchanging terms that are first. In premises about action nous is about the last term, the one that admits of being otherwise, and hence about the minor premise. For these last terms are beginnings of the end aimed at, since universals are reached from particulars.

We must, therefore, have perceptions of these particulars, and this perception is nous. That is why nous is both beginning and end; for demonstrations [begin] from these things and are about them.

The minor premise of a practical syllogism links a term in the major premise to a particular feature of the agent’s circumstances. The major premise of a (sound) practical syllogism is a universal principle that is always true (regardless of circumstances), whereas the minor premise

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20 Aristotle’s conception of nous as a faculty of non-discursive thought owes something to that of Plato. The foundation for Plato’s account of nous understood in this way can be found in the description of Socrates’ dream in the Theaetetus (201e ff.). For Plato, dianoia or discursive thinking is used to generate rational accounts of things and to generate and evaluate arguments. A rational account (logos) is a complex which is composed of forms. The forms themselves are simples, however, for which no account can be given. Plato thus proposes non-discursive thought (nous) as a way for the soul to acquire knowledge of the simples that compose the rational accounts of things (see Republic X 604c).


23 Aristotle, Post. An. II.19 100b.

24 NE VI.11 1143a-b. The translation is Irwin’s, but I have replaced instances of the term ‘understanding’ in his translation with ‘nous’.
of a practical syllogism “admits of being otherwise” in that it is only true in some circumstances. Aristotle gives the following as an example: “If, for instance, everything sweet must be tasted, and this, some one particular thing, is sweet, it is necessary for someone who is able and unhindered also to act on this at the same time.” The function of practical nous, then, is to grasp the particular feature referred to in a minor premise of a practical syllogism, such as the fact that this is sweet.

In the Nicomachean Ethics, Aristotle at first refers to this capacity to grasp particulars relevant to action as a kind of perception, but he later refers to it as ‘nous’ (such as in the passage from book VI, chapter 11 quoted at length above). Practical nous resembles sense perception in that it grasps particulars, and in that it is non-discursive. In book VI, chapter 8 of the Nicomachean Ethics, Aristotle distinguishes practical nous (which he refers to here as a kind of perception) from perception of special objects (i.e., from ordinary sense perception):

For nous is about the [first] terms, [those] that have no account of them; but phronesis is about the last thing, an object of perception, not of scientific knowledge. This is not the perception of special objects, but the sort by which we perceive that the last among mathematical objects is a triangle; for it will stop there too. This is another species [of perception than perception of special objects]; but it is still perception more than phronesis is.

Like practical nous, perception of special objects is not mediated by a concept, nor by discursive reasoning, but perception does furnish material for the formation of concepts and for discursive reasoning. This is analogous to the way in which, for Aristotle, nous furnishes material for theoretical and practical reasoning: theoretical nous provides a grasp of the simples and first

25 NE VII.3 1147a29-31.
26 NE 1109b20-23, 1113a1, 1126b24, 1147a26.
27 NE VI.8 1142a. Once again, I have substituted ‘nous’ for Irwin’s ‘understanding’, and ‘phronesis’ for Irwin’s ‘prudence’.
principles used in demonstration, and practical *nous* provides a grasp of the particulars used in deliberation.²⁸

For Aristotle, then, virtuous activity is directed by deliberation, which is in the form of or leads to a practical syllogism, the conclusion of which is a prescription for action. Deliberation makes use of practical intuition, which grasps the particular in a minor premise of a practical syllogism, but practical intuition is incapable of directing virtuous activity on its own. For that deliberation is needed, since intuition is incapable of grasping the universal principle in the major premise of a practical syllogism, and incapable of calculating discursively over the major and minor premises to reach a conclusion.

### 3. A Potential Problem for Aristotle’s Account

Recent research by cognitive psychologists provides evidence for the view that, in some contexts, intuition is actually more effective than deliberation at directing action. Psychologists define intuitions as “thoughts and preferences that come to mind quickly and without much reflection,” and they contrast intuitive thinking with deliberative thinking.²⁹ The distinction between intuitive and deliberative thinking is captured by the distinction between System 1 and System 2 cognitive processes:

The operations of System 1 are typically fast, automatic, effortless, associative, implicit (not available for introspection), and often emotionally charged: they are also governed by habit and are therefore difficult to control or modify. The operations of System 2 are slower, serial, effortful, and more likely to be consciously monitored and deliberately controlled; they are also relatively flexible and potentially rule governed.³⁰

²⁸ Though Aristotle doesn’t say this explicitly, deliberation presumably also makes use of the perception of special objects. To use an example provided by Aristotle (*NE* III.3 1113a1), it is presumably through perception of special objects that a person grasps the color of a loaf of baking bread, and through practical *nous* that he grasps that the bread has been baked the right amount.


³⁰ Kahneman, op. cit., 698.
System 1 resembles perception in that it generates impressions which are not verbally explicit; System 2, in contrast, generates judgments, which are verbally explicit.\(^{31}\) System 1 also resembles perception in that intuitions, like percepts, come to mind spontaneously and effortlessly.\(^{32}\) Psychologists’ concepts of intuitive (system 1) thinking, deliberative (system 2) thinking, and perception are strongly reminiscent of (if not necessarily equivalent to) Aristotle’s concepts of practical \textit{nous}, deliberation, and perception of special objects, respectively.

In some contexts, the use of System 1 or intuition frequently leads to errors, such as when experimental subjects are asked to solve the following puzzle: “A bat and a ball cost $1.10 in total. The bat costs $1 more than the ball. How much does the ball cost?”\(^{33}\) There is a large and well-known body of research, the literature on biases and heuristics, which provides evidence of the limitations of intuitive thinking.\(^{34}\) More recently, cognitive psychologists such as Daniel Kahneman have started to acknowledge the strengths of intuition:

\[\ldots\text{intuitive thinking can also be powerful and accurate. High skill is acquired by prolonged practice, and the performance of skills is rapid and effortless. The proverbial master chess player who walks past a game and declares, “White mates in three,” without slowing is performing intuitively (Simon and Chase, 1973), as is the experienced nurse who detects subtle signs of heart failure (Gawande, 2002; Klein, 1998).}\]\(^{35}\)

Gary Klein has written extensively about the use of intuition by experts.\(^{36}\) Deliberation using formal decision methods suffers from some disadvantages, such as the fact that it takes longer than intuition, the fact that it requires data such as probabilities (which may be unavailable), and the fact that it often requires values for complex variables which are difficult to estimate.\(^{37}\) The strengths of intuitive thinking are revealed in several studies which compare intuition and deliberation as methods for problem solving. In one study, for example, subjects who relied on

\(^{31}\) Ibid., 699.  
\(^{32}\) Ibid.  
\(^{33}\) Ibid.  
\(^{34}\) Gilovich, Griffin, and Kahneman, op. cit.  
\(^{35}\) Ibid.  
\(^{37}\) Ibid., 85-86.
analytical styles of decision making performed worse than controls on a flight simulator;\textsuperscript{38} in another, shoppers who made complex decisions\textsuperscript{39} with twelve variables actually performed better when they were prevented from deliberating.\textsuperscript{40} There is considerable evidence that experts often use intuition and not deliberation to solve problems.\textsuperscript{41} The decisions made by experts are frequently made without conscious deliberation.\textsuperscript{42} Systematically comparing possible courses of action is characteristic of novices, not experts,\textsuperscript{43} and considering additional options can reduce the effectiveness of decision-making.\textsuperscript{44} Skilled chess players, for example, typically conduct mental simulations of each promising move (as determined by their intuitive impression, not by a formal procedure), and then take stock of their responses to each, including their emotional responses;\textsuperscript{45} they do not follow a process of deliberation which appeals to a rational principle.\textsuperscript{46} The evidence also suggests that expert intuition operates in conjunction with sense perception, and consists in part of using sense perception in the right way; experts characteristically know where to look and how to make discriminations and recognize relevant connections in what they perceive.\textsuperscript{47}

Intuition is not always more effective than deliberation, however. Intuitive thinking is generally more effective in complicated domains, in which it may be impractical to provide a


\textsuperscript{39} In this discussion, the term ‘decision’ is not used to refer to Aristotle’s \textit{prohairesis}, the product of deliberation, but rather to refer to the choice which precedes and causes action, whether it is reached by deliberation or by intuition.


\textsuperscript{41} Klein, op. cit., 90-91.

\textsuperscript{42} Ibid., 88-89.

\textsuperscript{43} Ibid., 87.


\textsuperscript{45} Klein, op. cit., 79.

\textsuperscript{46} Ibid., 96.

\textsuperscript{47} Ibid., 37.
complete decision procedure that covers every circumstance.\textsuperscript{48} In order for intuition to be an
effective faculty for making decisions, however, at least two conditions must hold: the situation
must be reasonably predictable, and it must be possible for humans to learn from experience
about which decisions make for better outcomes in which situations.\textsuperscript{49} Examples of situations in
which efforts to develop reliable intuitions have failed include: selecting stocks, predicting the
recidivism of criminals, and predicting world events.\textsuperscript{50} There is also considerable evidence—not
adequately addressed by Klein—that in many contexts experts benefit from using formal
decision procedures, such as checklists, which can prevent them from forgetting to deploy tacit
knowledge, precisely by making such knowledge explicit, and which can prevent them from
making errors which intuition is prone to (such as errors in estimating statistical frequency).\textsuperscript{51}

This research, taken as a whole, poses a potential problem for Aristotle’s account of
virtuous activity. Aristotle seems to require every virtuous activity token to be directed by
rational deliberation. According to the research from cognitive psychology, intuition is a more
reliable form of thinking than deliberation in complex cases calling for decision, and moral
decisions must often take into account a large number of factors, such as conflicting moral
reasons and moral reasons from multiple sources. We would expect virtuous agents to use
whichever discovery procedure most effectively hits upon the virtuous action, unless there were
some compelling reason against using that discovery procedure. In the absence of such a
compelling reason, requiring the use of deliberation when intuition is more effective seems
arbitrary. Second, it would be surprising if virtuous activity turned out to be difficult or
impossible given human cognitive capacities, which would be the case if virtuous activity

\textsuperscript{48} Ibid., 40-41; cf. Dijksterhuis et al., op. cit.
\textsuperscript{49} Ibid., 110-111.
\textsuperscript{50} Ibid.
required deliberation and if intuition is more effective than deliberation at directing action in complex cases such as those characteristic of moral decision. It would be surprising, since virtuous activity for Aristotle constitutes the perfection and completion of human nature, and on this account virtuous activity seems difficult or impossible given natural human capacities.

4. Aristotelian Responses

I will briefly discuss two potential responses a defender of Aristotle might make in response to this problem. First, Aristotle’s theory of virtuous activity is a normative theory which offers an ideal for human character and action. As such, it is open to a defender of Aristotle to insist that virtuous agents must make use of deliberation to direct virtuous activity, even if it turns out that intuition, and not deliberation, is a more effective method for discovering the activity characteristic of virtue. If deliberation is required to direct virtuous activity, then if someone is able to use intuition to discover the activity characteristic of a virtuous agent, at best he will be able to use this information to conform to virtue, and not to engage in virtuous activity strictly speaking. It is an empirical question whether deliberation or intuition is a more reliable procedure for discovering the action which conforms to virtue, and the answer to such an empirical inquiry does not itself entail an answer to a normative question such as “What is virtuous activity?”

Nevertheless, if it turns out that deliberation is inferior to intuition as a discovery procedure for virtuous activity, this would still present a difficulty for Aristotle’s account. Aristotle’s account of virtue would end up looking like an account that is fitting for a kind of creature with different natural capacities than those possessed by humans, specifically a creature
whose capacity for deliberation is better able to handle complex situations than the human capacity for deliberation.

A second way of attempting to protect Aristotle’s account from the potential problem posed above is to weaken the requirement that deliberation occur before every virtuous activity token. There are at least two versions of this response. One is to hold that an agent must deliberate before engaging in the virtuous activity type, but that deliberation is not required before every token virtuous activity. Daniel Russell seems to hold a version of this interpretation of Aristotle; according to Russell, virtuous activity initially requires deliberation, but the specification of the general ends involved in deliberation can become habituated with sufficient practice, such that subsequent decisions make use of prior deliberation without themselves requiring deliberation: “deliberation takes time, until a deliberative pattern becomes habitual.”

Before deliberation has become habituated, every virtuous activity token requires deliberation, while after deliberation has become habituated, virtuous activity tokens do not generally require deliberation (except perhaps in novel or especially complex cases), since the pattern established by prior deliberation is sufficient to direct activity in the right way without spending additional time in deliberation. An objection to this response is that habituated deliberation does not seem to be the same as the intuitive thinking which is more effective in complex cases calling for decision; the latter does not seem to originate as a process of deliberation which then becomes automatic with repetition, though further research may be needed to clarify this point.

A second version of weakening the requirement for deliberation before every virtuous activity token is to hold that every virtuous activity token requires not an actual process of deliberation, but rather the conceptual structure characteristic of deliberation. This is the interpretation adopted by John McDowell:

It seems best to give Aristotle a pinch of salt on this: to take it, for instance, that when he suggests choice (prohairesis) is the upshot of prior deliberation (NE 1112a15). His point is really that the conceptual structure that is characteristic of deliberation figures in the proper explanation of the relevant actions, whether or not prior deliberation takes place.\(^{53}\)

This approach is similar to Russell’s, since Russell’s habituated deliberation would presumably take the form of something like McDowell’s deliberative conceptual structure. The difference is that McDowell’s approach need not assume that any virtuous activity tokens are preceded by deliberation (at least in principle); all any virtuous activity token requires is the conceptual structure characteristic of correct deliberation. One objection to this proposed solution is that intuition is not capable of having the conceptual structure characteristic of deliberation. The intuitive procedures used by experts often involve running mental simulations and monitoring emotional responses, for example, and this does not seem to have the same conceptual structure as a practical syllogism, cost-benefit analysis, or other form of deliberation.

Aristotle’s account of virtuous activity is somewhat unusual in the emphasis it places upon the role of intuition. This seems to put his account in a better position than some of its rivals in dealing with evidence from cognitive psychology of the important role played by intuitive thinking in human decision. Nevertheless, dealing with this empirical evidence may still prove awkward for Aristotle, since his account seems to require that deliberation direct every virtuous activity token. I have argued that there are at least two plausible responses open to a defender of Aristotle, and they both build upon interpretations of Aristotle’s view which are already present in the literature. Nevertheless, both of these responses face objections of their own. Aristotelians should think more about the roles of intuition and deliberation in virtuous activity, and should pay more attention to the recent psychological research which seems to bear on this issue—if only to be able to explain clearly why it is not as relevant as it may seem.

Works Cited


