

The Intelligence of Virtue and Skill

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A virtue is a disposition that is manifested in virtuous actions, thoughts, feelings, choices, etc.; such actions (etc.) are virtuous because they are manifestations of such dispositions. I will focus on actions. A just person is, as such, disposed to repay her debts; an agent's giving her creditor \$10 may be an act of justice, if it is a manifestation of that disposition, though it would not be if it had a different source—a passing fancy or feeling, say, or fear of punishment, or a plan to secure a larger credit line before skipping town. In repaying \$10, she may be halfway finished in repaying her debt, but she is not part-way finished in being just: being just, or living justly, isn't a project, even a long-term project like writing a novel—being just isn't the kind of thing the *ceasing* of which can take the form of *finishing* or *completion*. It is one and the same disposition of justice that underwrites a just person's repaying her creditor today, keeping a promise tomorrow, and refusing more than her fair share next week (unlike an intention or desire, a virtue is not exhausted or satisfied by any action of which it is the source), but these actions are not parts of a whole that a virtue represents as to be realized (and thus, unlike a plan or, perhaps, a policy, there is no set or totality of just actions that would exhaust or satisfy the demands of justice).¹ Hence the idea that just actions stand to the virtue of justice as its *exemplifications* or *manifestations*. Similarly, the elasticity of a rubber ball is not to be identified with the particular events (the stretchings, contractings, deformations, and reformations) that manifest it; its elasticity is a feature of the ball that persists even while it is not being manifested and is such as to contribute to an explanation of indefinitely many particular manifestations. These logical features of virtues and of the dispositions on which metaphysicians most focus—such as elasticity, solubility, fragility, etc.—seem to run in parallel.

Of course, no philosopher who takes the concept of virtue seriously would want to conceive of it as a disposition of the same sort as fragility or solubility. Virtuous action is not a blind, automatic response to a situation; a virtuous agent is not merely an ethical thermometer who unthinkingly detects ethical situations and then blindly produces a “jack-in-the-box” response—however appropriate that response might otherwise be taken to be.² Nor is she a “Good Dog”, as Christine Korsgaard dubs what she deems the “rebarbative picture of the virtuous human being” that she thinks some virtue theorists offer: an agent “whose desires and inclinations have been so perfectly trained that he always does what he ought to do spontaneously and with tail-wagging cheerfulness and enthusiasm.”³ Indeed, John McDowell insists that “[a kind person's] reliably kind behaviour is not the outcome of a blind, non-rational habit or instinct, like the courageous behaviour—so called only by courtesy—of a lioness defending her cubs.”⁴ Accordingly, he claims that “Virtue is a disposition (perhaps of a specially rational and self-conscious kind) to behave rightly.”⁵ And it is clear from the context that he thinks we should drop the “perhaps”—at least, if we could understand what we would thereby say. The worry that maintaining that a virtue is a disposition commits one to conceiving of its

manifestations as blind and unthinking—responses in which practical intelligence and rationality are absent—seems to stand behind the common practice of writers on virtue to object to using the term “habit” to characterize it, and to resist translating *ethos* and *hexis* (via *habitus*) as “habit,” on the grounds that (supposedly) “habit” connotes something whose manifestation precisely has a jack-in-the-box character.⁶ But to adequately address the worry, more needs to be done: it is not enough to insist that virtue does not consist in mere habit, or in the kind of disposition of which elasticity and fragility are examples; what is needed is a positive articulation of the metaphysics of virtue, in order to show how we can achieve a philosophical comprehension of what seems obviously right.⁷

As I understand her, Julia Annas takes up this challenge—among others—in *Intelligent Virtue*.⁸ She proposes to shed light on the intelligence of virtue, and thereby the idea that a virtuous action is an intelligent response to the situation, through an analogy with the intelligence of practical skills such as playing the piano. Annas concludes that “[t]he virtuous person acts by way of immediate response to situations, but in a way that exhibits the practical intelligence of the skilled craftsperson or athlete. It is at the opposite extreme from an automatic or routine response, one which bounces back mindlessly from whatever calls it forth.”⁹ After sketching Annas’s strategy (§1), I will argue that the conception of skill to which she appeals in fact fails to make intelligible the idea that skilled actions are both intelligent and immediate, and thus cannot serve as a model for understanding the intelligence of virtue (§§2–3). I’ll sketch an alternative account of skill, one that can vindicate the intelligence and immediacy of skilled actions (§4). But, I’ll argue, the intelligence of skill (thus construed) cannot serve as a model for that of virtue, either (§5). I’ll suggest instead that the kind of knowledge involved in virtuous action is not primarily knowing *how* to do things (as it is in skill), but rather knowing *to do* (or not do) things (§6).

1. Annas’s Strategy

Here is Annas’s line of thought, as I understand it, in outline. Virtues are dispositions, but they differ from dispositions like fragility, solubility, and elasticity in important ways. A virtue is *acquired* through *habituation*: whereas “glass does not have a disposition [to break under certain circumstances] by way of *doing* anything, nor can it learn to develop selectively as a result of encounters with different circumstances,” a bearer of generosity has that disposition by virtue of doing and feeling various things, and her disposition is “strengthened by her generous responses and weakened by her failures to have them.”¹⁰ (Admittedly, a certain object might become more elastic as a result of being stretched and released; but it does not belong to the concept of elasticity as such—or to the “scientific” conception of a disposition of which it is an example—that the disposition is affected one way or another by its manifestations. Another elastic object might become less elastic the more it is stretched.) But the fact that virtues are strengthened by being manifested (and weakened by failures of manifestation) is not enough to explain why virtues and their manifestations are intelligent whereas mere dispositions—“static lasting

tendenc[ies]”—and their manifestations are not.¹¹ After all, habits and mere routines are dispositions that are acquired by, and manifest in, acting, yet it is characteristic of such dispositions to produce the same performance over and over again, even when the situation calls for something different (e.g. one finds oneself driving one’s habitual route to work, despite knowing that there’s construction and having intended to take a different route). This liability of habit and routine to fail to adapt appropriately to the concrete circumstances would seem to indicate the absence of intelligence: a response has become fixed, inflexible, ingrained. If this is what habituation yields, then pointing out that virtues are dispositions acquired by habituation seems only to exacerbate the worry that their dispositional character (immediate manifestation—that is, *not mediated* by reasoning about what to do—in suitable circumstances) is in tension with their purported intelligence, suggesting, perhaps, that virtue is a mere habit, and virtuous action a mere routine, unintelligent response to the presence of triggering conditions. “It is natural to worry,” Annas says, “whether habituation is just habit, and whether a virtuous disposition is just one built up by force of habit. Our experience leads us, in a number of areas of our lives, to develop habits which save time and effort. If developing a virtue is like this, why should we think it amounts to anything more than habit and even mere routine?”¹²

Annas’s solution involves attending to practical skills, like playing the piano, playing tennis, building, plumbing, and so on. Practical skills are acquired by habituation, too—“but the result is not routine but [a] kind of actively and intelligently engaged practical mastery.”¹³ A skilled pianist plays expressively, not mechanically, meeting the technical demands of Bach, Chopin, and Debussy in the stylistically different manners those composers call for; a good tennis player adjusts her strategy to the surface and weather conditions, her fitness and form, and her opponent’s strengths and weaknesses; an expert plumber is ready to tackle new and complex challenges in unusual plumbing systems as well as the standard problems; and so on. Skilled agents do not just do the same thing, in the same way, over and over again. And unlike the chameleon’s, their adaptability is due to their intelligence—their specifically practical intelligence, or so we ordinarily think. Annas thus claims that “[t]he analogy with practical skill...enables us to see how virtue can be a disposition requiring habituation without becoming mere routine.”¹⁴ But for it to do so, two conditions must be met. First, we need to be able to adequately distinguish practical skills from mere habit and routine in a way that vindicates the idea that practical skills are genuinely intelligent. Secondly, we need to be able to see how virtues could exhibit the intellectual structure of practical skills—or something close enough to it. I will argue that Annas’s conception of practical skill fails to meet the first condition. This is not to say that the first condition cannot be met, of course. In my view, Aristotle’s conception of skill—as I understand it—indeed meets it. However, once the features of that conception, which vindicate the intelligence of skill, are brought into focus, it is clear that the second condition cannot be met: I conjecture that there is no conception of practical skill that satisfies both conditions simultaneously.

2. Annas on the Intelligence of Skill

In distinguishing practical skill proper from mere habit or routine, in order to establish that skills are genuinely intelligent dispositions, Annas walks a path left by Gilbert Ryle. In *The Concept of Mind*, Ryle argued against accounts of human action according to which what it is for a person to perform an action manifesting qualities of mind is for merely mechanical bodily movements of hers, themselves intrinsically unfit to receive mental predicates, to be caused by appropriate mental states or events in virtue of which the relevant mental predicates are given derivative application to the bodily movements.¹⁵ Ryle rejected “the general supposition that the question, ‘How are mental-conduct concepts applicable to human behaviour?’ is a question about the causation of that behaviour,” and instead suggested that we view actions as the manifestations of “multi-track dispositions.”¹⁶ However, his discussion is shot through with the worry that his dispositionalist alternative to the causal theories of agency he rejects will make it impossible to distinguish the rational, intelligent, self-determined exercises of agency that interest him from the “blind” and “automatic” manifestations of “pure habit.” In response, Ryle claimed that “the common assumption that all second natures are mere habits obliterates distinctions which are of cardinal importance for the inquiries in which we are engaged,” and sought to differentiate from mere habits (among other things) *skills*, which play a central role in his discussions of intelligent agency under the heading of “knowledge how.”¹⁷

Distinguishing between skill and habit is a challenge because they can appear indistinguishable in both their mode of acquisition and in their exercise. To take Annas’s examples, compare a person in the habit of driving the same route to work every day with a skilled pianist. At first, after starting the job, the driver experimented with a few different routes, thinking about which was the best—which avoided traffic without being too indirect, which is better at what time of day, and so on—and then settling on the best route. Over time, she no longer needs to think about where to turn, which lane of the highway to be in, and so on. Her driving the route to work does not depend on any conscious thought about how to do it. Similarly, the pianist acquired her skill through practice and analysis, involving thinking about various technical and musical issues and their interplay. But now that she is a skilled pianist, when she is playing a piece she is not thinking about how to execute a trill, how to hold her hands, which fingering to use, and so on—she just does these things, without any conscious thought about how to do them. As Annas notes, “When we see the speed with which a skilled pianist produces the notes we might be tempted to think that constant repetition and habit have transformed the original experience, which required conscious thought, into mere routine.”¹⁸

But Annas, like Ryle before her, thinks that the similarity between the cases is merely superficial. Habits and routines reliably produce performances of the same type, but they are not flexible: an agent may—perhaps to her surprise or irritation—do what she is in the habit of doing even though the circumstances in fact call for her—and she may have intended—to do something different (or to do the usual thing in a different way). The driver finds herself having driven the usual route to work despite having known about the construction and having intended to go a different way: “driving has become detached from [her] conscious thinking, and [her] conscious

and deliberate thoughts may fail to be properly integrated with it”.¹⁹ By contrast, skills are both reliable *and* flexible: the exercises of a skill are not mere replicas of each other; they are (reliably yet fallibly) appropriate to the circumstances and integrated with, and informed by, the agent’s practical thought.²⁰ Whereas the agent’s behaviour is cut off from her thoughts in the routine exercise of mere habit, in the case of skill “[t]he practical mastery is at the service of conscious thought, not at odds with it.”²¹ If the pianist wants to play a piece she knows well in a different way from normal, that’s what she’ll generally do—she won’t go onto autopilot and play it in the normal way. Of course, one’s habits don’t always prevent one from adapting to the circumstances, and one’s exercises of a skill do sometimes degenerate into thoughtless automaticity. But it seems plausible to say that it is typical of the sorts of habits Ryle and Annas have in mind that one ends up doing the thing in question in the normal way even on an occasion when one wanted to do it differently, whereas it is typical of a developed skill that one’s exercise of it successfully adapts to the goal and situation at hand. Thus, though neither the driver’s routine performance nor the pianist’s skilled one is “dependent on conscious input,” these performances nevertheless relate to their respective agents’ conscious thinking in different ways: the manifestation of habit and routine is, in a certain sense, mindless, whereas the exercise of skill is not.²²

According to Annas, what explains these intellectual differences between skill and mere habit is that the two kinds of disposition are acquired through different types of habituation.²³ The kind of habituation that leads to the acquisition of a skill, as opposed to that which yields mere habit, is intellectually rich—it’s a matter of education, not rote inculcation—and as a result, the skill that is thereby acquired has an intellectual structure. Similarly, Ryle claims that “[w]e build up habits by drill, but we build up intelligent capacities [e.g. skills] by training. Drill (or conditioning) consists in the imposition of repetitions. ... Training, on the other hand, ... involves the stimulation by criticism and example of the pupil’s own judgment. ... Drill dispenses with intelligence, training develops it.”²⁴ It is not clear to me, however, whether Ryle thinks that the contrast between the two kinds of habituation *explains* the difference between skills and mere habits, or whether it is simply another mark of that difference.²⁵ Certainly Annas’s careful discussion of the intellectual structure that belongs to the kind of habituation through which skills are acquired brings out crucial aspects of her conception of skill. Indeed, she describes the account of virtue that she develops by analogy with skill as a developmental one. The intellectual structure of the kind of habituation that Annas thinks is common to the acquisition of both skills and virtues is marked by what she calls “*the need to learn*” and “*the drive to aspire*” (“to aspire, that is, to understanding, to self-direction, and to improvement”).²⁶

The point of departure for Annas’s account is the fact that skills are characteristically acquired through *learning* from teachers.²⁷ Crucially, this involves more than merely copying or imitating, which can only get you so far. You need to understand which aspects of the model you’re working from are important, and which irrelevant; and you need to know why. This requires either active thought on the part of the learner that goes beyond passively taking in the gestalt of the model, or explanation on the part of the teacher, and, in the normal case, both. The

learner learns from the teacher not just *what* to do, but what to do *and why*; she comes to see how changes in the *why* mandate adjustments in the *what*. But she does not acquire a mere heap of piecemeal beliefs of this form; rather, she comes to think such connections for herself, so that she gradually arrives at a unified *understanding* of the field of practice. Eventually, she's in a position to produce performances appropriate for the situation at hand that (by contrast with the routine behaviour that issues from a habit) may differ radically in their outwardly observable features from each other and from those of her teacher. Moreover, she's in a position to explain what she is doing and why, just as her teacher did in teaching her. Knowing what to do without knowing why to do it can result only in mere routine, reliable but inflexible because the agent, not knowing why she is doing what she is doing, is at a loss when circumstances change, when what she has been doing so far stops working. The why-understanding the learner arrives at is thus that which enables her to become independent from her teacher—to become *self-directed*. And as a skill will plateau and even degenerate into mere routine through the hardening of understanding into dogma, reflective practice is required to maintain, and even develop and improve, practical expertise.²⁸ Thus Annas insists—with Aristotle (*Metaphysics* A.1), but against those who would conceive of skills as non-rational—that “[t]he ability both to teach and to learn a skill...depends on the ability to convey an explanation by giving and receiving reasons. It thus requires some degree of articulacy.”²⁹ The relevant reasons will be *practical* and *productive*: to ski well one needn't have physiological or biomechanical explanations of how skiing works (though these might be useful if integrated into one's practical understanding). Call this condition on someone's bearing a skill, namely that it involves a *productive, rationally-articulated understanding of the skill's domain*, the **Articulacy Requirement**.³⁰

Some philosophers would question the characterization of skill that Annas offers. (Annas allows that the Articulacy Requirement does not apply to everything we *call* a skill—tying one's shoelaces, for instance, “is not a matter of sufficient complexity that we need to understand what is crucial in it.”)³¹ Those who defend intellectualism about knowledge how often factor practical skill into two components: propositional knowledge, which accounts for the intelligence of skill, and non-cognitive abilities and mechanisms, which account for its practicality.³² Ryle, who rejected intellectualism, is often labeled an anti-intellectualist by others (he did not use the term himself), but—as I have argued elsewhere—this is misleading: Ryle thought that skills were rational capacities, and constitutively involved thought.³³ Indeed, Annas worries that her account, which is very close to Ryle's, “might seem over-intellectual.”³⁴ The real anti-intellectualists, in my view, are philosophers like Hubert Dreyfus, who holds that “mindedness is the enemy of embodied coping,” and that the exercise of practical skills has “a kind of content which is non-conceptual, non-propositional, non-rational...and non-linguistic,” a kind common to “everyday perceivers and copers such as infants, animals, and experts.”³⁵ I am sympathetic to the sort of view of skill that Ryle and Annas present, and it is beyond the scope of this essay to consider the kinds of criticisms that intellectualists and (real) anti-intellectualists might make of it.³⁶ Instead, I want to consider whether the conception can stand on its own feet.

One of the reasons that Annas suspects that her account of skill is overly, and objectionably, intellectualistic, is that the Articulatory Requirement “seems to sit uneasily with the fact that practical expertise is exercised readily and without hesitation, with an immediacy that seems not to leave psychological room for the entertaining of reasons. ... How can this immediacy of engagement go with the idea that practical expertise requires the giving and understanding of reasons?”³⁷ The challenge, then, is for Annas to reconcile the Articulatory Requirement with what I will call the **Immediacy Requirement**—the requirement that a skill is appropriately exercised in response to the relevant situation *without the mediation of reasoning* about what kind of response would be appropriate and how to execute it. I think Annas fails to meet this challenge.

3. Articulatory vs. Immediacy

Annas attempts to satisfy the Immediacy Requirement by suggesting that the “thinking before acting” that yields understanding is required less and less as the learner develops expertise; when expertise has been acquired, “the thoughts required in learning...have...effaced themselves.”³⁸ Because the thoughts have effaced themselves, the idea that the skilled agent’s exercise of expertise is direct and immediate is preserved, and the Immediacy Requirement satisfied. However, this might just as well suggest a picture on which the reasons for action that articulate the learner’s understanding figure as mere training wheels, as it were, that frustrate immediacy by taking up “psychological room” and that gradually can—and perhaps ultimately must—be dispensed with as the learner becomes an expert capable of genuinely immediate response. The objection is thus that when it comes to the *exercise* of skills, the articulated understanding that otherwise distinguishes skills from mere knacks is an idle wheel.

To avoid this implication, Annas insists that, “[though] the thoughts have effaced themselves, ... they have not entirely evaporated.”³⁹ This may be shown, she thinks, in a couple of ways: if an expert finds herself in a sticky situation, she doesn’t need to start solving the problem from scratch, as she might if the rationally-articulated understanding had “evaporated”; similarly, on her conception of expertise, the expert is as such in a position to teach a learner, to provide her with explanations in the medium of reasons for action—something she couldn’t do if those reasons had evaporated. Neither of these features belongs to the bearer of a habit or mere routine: habits and routines lack flexibility, so an agent will have to solve a practical problem from scratch in novel circumstances; and as habit and routine require only knowledge of the “that” but not the “why,” their agents can serve merely as models for imitation, not genuine teachers, and their imitators—insofar as they remain ignorant of the “why”—cannot themselves progress beyond mere routine to genuine skill.

This response to the idle wheel objection is inadequate. Though suggestive, it is unclear how to cash out the image of thoughts that have effaced themselves without completely evaporating. What seems clearer, however, is that what Annas says by way of explication doesn’t speak to the problem of reconciling the Articulatory and Immediacy Requirements. The

facts (1) that a skilled agent can remember and call on her training in a new and difficult situation, and (2) that she can explain to a beginner that (and why) when P one should do A but when Q one should do B, don't show that the intelligence manifested in *these* situations is also manifested in the normal case in which she smoothly exercises her skill, responding to a situation in the normal range. But if the intellectual structure of a skill isn't *operative* in skilled action, then why should we credit skilled action with manifesting intelligence?

It's beside the point that the intellectual structure was necessary for the acquisition of the skill, and that the skilled expert can still access that structure when need be. After all, much research and planning might have gone into the design of a habitual routine and a program of conditioning it; but this would not show that, in acting from the habit thereby inculcated, the agents—who might be adults, children, dogs, or mice—would themselves manifest the same intelligence that went into the planning and the programming. The philosophical dilemma remains unresolved: either the thoughts that constitute the intellectual structure of a skill are operative in the skill's exercise, in which case the action no longer appears to be direct and immediate, or they are not operative, in which case the basis for crediting the action with intelligence seems to have evaporated—whether or not the thoughts themselves have.

The upshot, then, is that Annas's strategy fails at the first step: though she has identified various respects in which genuine skills differ from mere habits with respect to their intelligence, she hasn't been able to distinguish them at the crucial point of their exercise. But if we don't understand how exercising a skill in the normal way differs from the blind manifestation of a "sub-rational knack," then not only we will fail to understand the nature of skill; we won't have a plausible model for the intelligence of virtue, either, on the reasonable assumption, shared by Annas, that the virtuous agent displays practical intelligence in *acting from virtue*, and not just in acquiring and maintaining virtue and in bringing up her children.⁴⁰

This problem is, I think, symptomatic of a more general difficulty that faces contemporary philosophical uses of the skill analogy. Annas justifies her strategy by writing:

We do not find anything problematic in the fact that a skilled plumber, pianist, or marathon runner will respond to a challenge directly, without explicit thoughts about good plumbing, playing, or running. These are not needed, as they are in apprentices, who need them in order to develop the expertise that will be exercised without reference to them. *In everyday life nothing is more familiar or commonplace than this point about the development of a practical skill.* On the present account of virtue we can see that and why it is not problematic for virtue either.⁴¹

It is perhaps true that, in everyday life, we find nothing more familiar or commonplace than the idea that in practical skill Articulacy and Immediacy are united. The problem is that *in philosophy* we find reasons to think that, *pace* the appearances, these features pull in different directions (see the debate between intellectualists and anti-intellectualists about knowledge how). To underwrite her use of the analogy, Annas needs a philosophical account that can vindicate the wisdom of everyday life. I have argued that the idea that a practical expert's reasons for acting

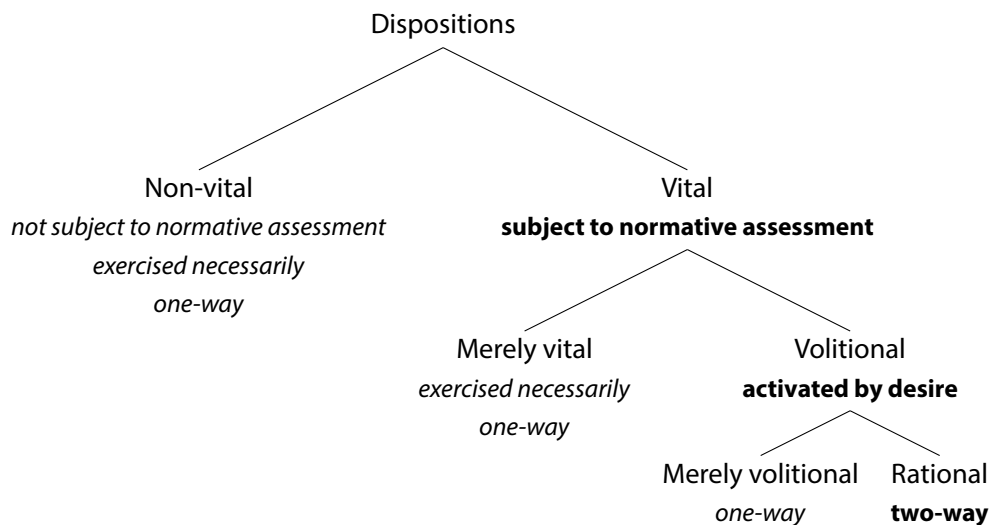
have effaced themselves without evaporating—and what Annas says by way of explication—do not suffice to vindicate it.

4. An Alternative Conception of the Intelligence of Skill

In my view, we can reconcile Articulacy and Immediacy, but only by giving up an assumption—widespread in contemporary philosophy, and shared by Annas—about what it would be for reason to be operative in action. Annas assumes that for the expert’s practical understanding to be *operative* in her exercise of skill, conscious thoughts and episodes of reasoning would have to take place, occupying valuable *psychological room* and thereby undermining the performance.⁴² As long as this conception of what it would be to satisfy the Articulacy Requirement in the (ordinary) exercise of skill remains in place, it is clear that the Immediacy Requirement can’t be satisfied alongside it. But what other way is there to conceive of the expert’s practical understanding being operative?

To answer this question, we need to reconsider what we are doing is distinguishing practical skills from other sorts of dispositions—not just habits and mere routines, but fragility and solubility, etc. Many of Annas’s observations about the respects in which skills differ from these sorts of dispositions strike me as correct. She distinguishes “dynamic” dispositions such as skills, virtues, vices and other kinds of trait from “static” dispositions such as fragility on the grounds that dynamic dispositions are acquired, maintained, and developed in particular ways. Similarly, she distinguishes skills from mere habits in that the manner in which skills are acquired, maintained, and developed is one of *education* rather than mere habituation. But neither distinction involves rethinking what it is for the disposition to be exemplified, of the way in which the disposition explains its manifestations—hence our difficulties in locating a role for intelligence to play in the exercise of a skill. A distinction that did this—that involved rethinking the manifestation of the disposition—would distinguish *forms* of disposition.

Here I will only sketch a series of such distinctions, and thus a series of forms of disposition. (There is much more to be said about the idea of a form of disposition and about the forms of disposition identified here.)



The first distinction is between *vital* and *non-vital* dispositions. The analytic metaphysician’s favorite dispositions (solubility, elasticity, fragility, conductivity, and so on) are non-vital dispositions; by contrast, a heliotropic flower, such as the arctic poppy, possesses a vital disposition—in this case, the disposition to turn towards the sun. Both kinds of dispositions explain their manifestations, but vital dispositions are also normative for their manifestations. *This* arctic poppy may be judged as tracking the sun *well* or *badly*; the standards for the judgment come from a specification of the disposition, which is understood by reference to its place in the life-cycle of *the* arctic poppy; we thereby assess the disposition’s manifestations as good and bad relative to a standard *internal* to the disposition. By contrast, if we speak of a glass as breaking well or badly, this can only be by reference to our purposes and expectations, standards *external* to the disposition.⁴³

The second distinction is a division *within* vital dispositions, between *merely vital* dispositions and *volitional* dispositions. Merely vital dispositions, such as the arctic poppy’s disposition to track the sun and our digestive dispositions, are like non-vital dispositions in that they are manifested (as it were) *automatically* when the opportunity or stimulus for their manifestation is present (as long as nothing interferes). Volitional dispositions are distinguished from merely vital dispositions by the fact that the desire or choice of the subject of the disposition enters into the explanation of its manifestation. You can lead a horse to water, but you cannot make it drink; it has to want to. But there is no sense in which a heliotropic flower wants to track the sun; the flower simply responds to the sun’s light and tracks its movement over the course of the day.

The third distinction is within volitional dispositions, between *merely volitional* dispositions and *rational dispositions*. Whereas a merely volitional disposition is manifested (when the opportunity presents itself) only when the subject’s desire *activates* the disposition, a rational disposition is manifested (when the opportunity presents itself) when the subject’s will *activates and directs* the disposition. Note: it is crucial not to misconstrue the role of desire in the manifestation of a volitional disposition as a circumstance or trigger for that manifestation—

otherwise the difference between vital and volitional dispositions will merely be one of content, not of form.⁴⁴ The same goes for the role of desire (or the will) in the *direction* of a rational disposition's exercise: desire's activating a volitional disposition, and its activating and directing a rational disposition, is not distinct from the disposition's manifestation (as a circumstance or trigger is).

Recall that vital dispositions, by contrast with non-vital dispositions, are both *explanatory of* and *normative for* their manifestations. Because vital dispositions set a standard for their manifestations, those manifestations can be judged as good or bad *qua* manifestations of the dispositions of which they are manifestations. In the case of a merely vital disposition, it is not up to the subject of the disposition whether it is manifested when conditions are apt for its manifestation; in the case of a merely volitional disposition, it *is* up to the subject whether it is manifested when conditions are apt, but it is *not* up to the subject whether the manifestation is good or bad; in the case of a rational disposition, whether or not the manifestation is good or bad falls within the scope of the subject's choice whether to actualize the disposition, and thus the subject's will can be said to both activate the disposition and direct its manifestation. A rational disposition is such that its bearer can choose not just *whether* but *how* to exercise it. This is because, unlike the lower forms of disposition, a rational disposition consists in *productive knowledge* of the normative layout of the domain of its manifestations—knowledge, that is, of the good and the bad, as they are determined by the standards internal to the disposition.

By articulating this hierarchy of forms of disposition, we have almost reached the definition that Aristotle gives of a rational disposition (*dunamis meta logou*) in *Metaphysics* Θ as a “capacity for opposites” (or a *two-way power*, as it's sometimes called):

As regards those capacities which are rational, the very same capacity is a capacity for opposites, but as regards the non-rational capacities a single capacity is for one thing: for example, heat only for heating, while the medical craft for both disease and health. The explanation of this is that knowledge is an account, and the same account clarifies both the thing and its privation, though not in the same way, and in one way it concerns both, while in another way it concerns rather the positive. So it is also necessary that such sciences should be of opposites, but concerning the one *per se* while concerning the other not *per se*. For indeed the account concerns one opposite *per se*, but concerns the other opposite in a way incidentally: for it is through denial and negation that it clarifies the opposite—for the primary privation is the opposite, and this is the negation of the other. (*Metaphysics* Θ.2, 1046b5–15, tr. Makin)

Aristotle's example of a two-way power is the *technê* of medicine, which can be used either to heal or to harm, at the doctor's will. What we must add to our conception of a rational disposition to match Aristotle's, is the idea that though the art of medicine can be used to heal or harm, it does not relate to each option in the same way: it concerns “the one [opposite] *per se* while concerning the other not *per se*.” The doctor's knowledge how to harm inheres in her knowing what *not* to do in order to heal (for example, if she knows that 10mg of a drug is an

effective and safe dose, then she thereby has some knowledge of how to give an ineffective or dangerous dose), and it also inheres in her knowing how to do something that in some circumstances would harm but in others would promote health (for example, knowing how to break a bone in order to reset it). So some productive knowledge how to do a bad job will always come for free with productive knowledge how to a good job. This knowledge will be more limited and less determinate than the productive knowledge how to harm possessed by the expert poisoner or the torturer (though Aristotle would probably find the idea of a genuine *technê* of poisoning or torturing problematic, and for good reason). A doctor is as such unlikely to know how to waterboard someone; and medical residents don't learn their craft by learning how to avoid waterboarding, or how to waterboard badly. The bearer of a skill has productive knowledge of both the good and the bad, relative to that skill, but whereas her knowledge of the good is positive, her knowledge of the bad is, as Aristotle says, "by denial and negation".

By thinking of skills as rational dispositions along Aristotle's lines, we can see how to satisfy both the Articulatory and Immediacy Requirements together. In possessing the skill, the agent has a normatively-articulated understanding of its domain that is organized by what, according to the standards of that domain, it's good and bad to do. In exercising the skill, the agent knowingly traverses that topography for the sake of that for which she is exercising it.⁴⁵ She knows and understands what she's doing, and knows that she's exercising the skill she's exercising. This knowledge needn't be understood psychologically, either in terms of something running through the agent's head, or as a meta- or higher-order representation (perhaps tacit) that is independent of the actions of which it is an awareness. Rather, on this view, the exercise of skill is itself an essentially self-conscious act.⁴⁶

The skilled agent's expert action is thus to be contrasted with the blind, unchosen response of her stomach to the food in it, and with the chosen but (by comparison) uncomprehending manifestation of a dog's ability to catch a frisbee. Each of these three manifestations of a disposition is immediate, but the character or *form* of the immediacy differs. *Choice* characterizes the form that the manifestation of a disposition takes (its Immediacy) when the disposition is a volitional disposition; *rational comprehension*—knowledge, understanding—characterizes its form in skill. We may therefore say that, far from giving rise to conflicting requirements, Articulatory is the form that Immediacy takes when the relevant disposition is a *rational* disposition.

5. The Intelligence of Skill ≠ the Intelligence of Virtue

Unfortunately, reconciling the Articulatory and Immediacy of skill in this way is of no help to Annas: we have met the first condition for her strategy's success (vindicating the intelligence of skill) in a way that rules out meeting the second condition (showing that virtues have the same kind of intellectual structure as skills). The intelligence of skill consists in its being a two-way power. If virtues had the same kind of intellectual structure as skills, then they would be two-way powers. And if virtues were two-way powers, then it would be possible to manifest, say, justice

by intentionally wronging someone, as a doctor could manifest her medical knowledge by intentionally poisoning her patient.⁴⁷ But it's not possible to manifest justice by acting unjustly—certainly not by doing so intentionally. This is among the reasons why Aristotle rejects the idea that virtue is a skill.⁴⁸

As Aristotle notes (*NE* 1140b23-25), in the case of skill, we rate a craftsman who doesn't make mistakes more highly than one who does, but we rate one whose "mistakes" are voluntary more highly than one whose are involuntary; too much involuntary error and we no longer think it fit to call him a craftsman at all. With virtue, it's the other way around: we're more inclined to tolerate involuntary error than voluntary error; involuntary error *may* undermine the agent's claim to virtue, but voluntary error *surely* does. As Philippa Foot puts it, "If a man acts unjustly or uncharitably, or in a cowardly or intemperate manner, 'I did it deliberately' cannot on any interpretation lead to exculpation."⁴⁹

Moreover, because two-way powers are volitional dispositions (of a special kind), the bearer of a two-way power can choose not to exercise it even when the opportunity for exercising it arises without undermining our attribution of the disposition to her. Yet it is clear that an agent's choosing not to repay a debt when she had the opportunity to would undermine our attribution of the virtue of justice to her. "Why didn't you ϕ when you had the chance?"—"I didn't feel like it" is a fine exchange when " ϕ " signifies a verb of skill, but not when it signifies a verb of virtue.

To sum up: Skills are two-way powers. Virtues are not two-way powers. Therefore virtues are not skills. Now, Annas does not need the claim that virtue *is* a skill; her official line in *Intelligent Virtue* is that she is exploiting an *analogy* between virtue and practical skill. However, she admits that "[s]ome readers may come to think that 'analogy' is not the best term for a relation so close that some have come to think of virtue as itself being a kind of skill."⁵⁰ To my mind, Annas ignores or downplays features that have seemed to Aristotle and others to require rejecting the idea that virtue is a (special kind of) skill: she draws no distinction—like Aristotle's *poiesis–praxis* distinction—between the kinds of action in which skill and virtue are manifested, the two-way character of skill does not come up, and its distinctively instrumental teleology is downplayed.⁵¹ Though she acknowledges "what seems to be a central difference of virtue from skill, namely that skills are local," she elsewhere suggests that this is no barrier to conceiving of virtue as itself a skill: it must simply be conceived of as unlike plumbing, playing the piano, or speaking Italian in that it is a skill with *global* scope.⁵² But even if we hew to the official line (that she is exploiting an analogy), Annas's argument nevertheless requires the claim that virtues *share the intellectual structure* of skills. If the intellectual structure of skills were merely contingently connected with their being two-way powers, then perhaps this claim might be sustained. But it's the intellectual structure of skills that makes them two-way powers, so virtues, which aren't two-way powers, don't share the intellectual structure of skills.

If we focus only on those features that Annas thinks distinguish genuine skills from mere habits, we might be convinced that skills and virtues share a common, or sufficiently similar, intellectual structure. But because that conception of skill cannot reconcile Articulatory with

Immediacy, it fails to vindicate the claim that skills are *intelligent* dispositions, and thus an analogy with it cannot establish the intelligence of virtue. If we adopt the Aristotelian conception of skill, which *does* reconcile Articulacy and Immediacy (through its introduction of the idea of distinct *forms* of disposition and in particular the idea of a *rational* form of disposition), the intelligence of skill is secured at the expense of an analogy with the intelligence of virtue. There thus seem to be two paths that a defender of the intelligence of virtue might take: either to develop an alternative conception of skill and pursue Annas's analogical strategy anew, or to develop an alternative conception of virtue, one less closely modeled on that of skill. In the remainder, I will sketch a version of the latter approach.

6. An Alternative Proposal for the Intelligence of Virtue

I begin by noting a fundamental difference—passed over by Annas—between skills and virtues: to enumerate a person's skills is to say what she *can* do, whereas to list her virtues is to say what she *does* do. Anthony Kenny illustrates the point: “To be generous it is not enough to be able to put others first: it is necessary actually to do so. To know French it is not necessary to write one's French verbs correctly; it is enough to be able to do so.”⁵³ To say that a generous person *does* put others first—or that *she puts* others first—is not to say that she is actually putting others first here and now. Being generous doesn't require performing a generous act at every moment. Nevertheless, “She is generous” and “She puts others first”, no less than “She is acting generously (right now)” and “She is putting others first (right now)”, record claims about actuality. As Michael Thompson puts it:

Propositions that come to us in generic or habitual trappings [e.g. *She puts others first*]...are no different, in this respect, from propositions that come to us in progressive trappings [e.g. *She is putting others first*]. They are all properly categorical and not merely normative or modal or hypothetical propositions. Where they have practical content, they tell us what agents are actually doing or actually do, not what they ought, might or would do.⁵⁴

Whether an agent exercises a skill—whether she in fact does what she can do—will depend on her purposes; and these purposes may call for her to exercise her skill in a way that, from the standpoint of the skill alone, is imperfect. (There need be nothing in the least immoral about this: when time, resources, or money is lacking, it's perfectly in order for a contractor to do work that is not, strictly speaking, first-rate; and when teaching a skill, an expert may have good reason to show her pupil what *not* to do.) Skill has, internal to it, its own reasons, but it depends on—and they can, to some extent at least, be overridden by—reasons for exercising it.⁵⁵ Because skills are *used*, they thus *depend on* the will (or choice, or whatever your preferred power or faculty is) for their direction and determination—their subordination to a particular end. Virtues, by contrast, are excellences of willing or choosing; they do not depend for their manifestation on a choice that comes from somewhere else. (Different philosophers who are broadly sympathetic to this

sort of picture will make out the details in different ways, depending on whether they assign different virtues to different parts of the soul, and how they envisage the unity of the virtues; I remain neutral on such issues here.)

There is thus a sense in which virtues are always in act.⁵⁶ Even though it seems clear that skills and virtues both exemplify the category of second potentiality—first actuality (a generous person needn't be doing anything generous right now, and when she *is* doing something generous her generosity is most fully on display), nevertheless a virtue is, as such, *more active* than a skill. Consider a skilled (or once-skilled) pianist, who has gone years without playing the piano. It is no longer true that *she plays the piano*; rather, she *used to* play the piano. But maybe she still has the skill; we find out when she tries to play again (“Has she lost it? Or has she still got it?”). By contrast, if a generous person were to stop putting others first, he would simply no longer possess the virtue of generosity, even if he was still *able* to perform such actions as he once performed. If he were, so to speak, to *take up* generosity again, he would not show himself to be—to our surprise—*still* generous after all this time; it would be, as it were, a different generosity (cf. if a man stops wearing a beard, and then starts wearing a beard again, he is wearing a different beard).

Note, however, that, with respect to the contrast between what someone *can* do and what she *does* do, virtues are not only unlike skills; they are like habits. Someone who is in the habit of driving the same route to work every day not only *can* drive to work via that route; she *does* drive to work via that route, whether or not she is doing so right now. (It should be noted that such predications, which involve what linguists call “habitual aspect,” tolerate exceptions: “She drives to work via such-and-such a route” is not falsified by her taking the bus, or driving via a different route, on an occasion. Whether ascriptions of virtues tolerate such exceptions, as ascriptions of other kinds of character traits do, seems to me a substantive question, which cannot be addressed here. Does virtue exclude acting akratically?)

Habits are not—as skills are—capacities or powers; rather, they are determinations of the will. (Good habits may be excellences—albeit local ones—of the will, though bad habits certainly aren't.) Indeed, though I earlier acceded to the conception of habit she uses in order to delineate her conception of skill, Annas—again like Ryle!—in fact conflates two distinct phenomena. On the one hand, there is the idea of a disposition of the will (what someone *does* do). On the other hand, there is the idea of an *imperfect* practical capacity (what someone *can* do)—this is where the idea that skills can “ossify and decay” and thereby “become routine”⁵⁷ fits, along with the thought that shoelace tying doesn't amount to a genuine skill because it lacks the kind of complexity that calls for understanding.⁵⁸ Nevertheless, even if I have little understanding of the “why”s of shoelace tying, and even if I tie them in an unthinking, routine way, each performance but a replica of the last, my knowledge how to tie my shoelaces constitutes a *capacity*, not a *habit*: perhaps I *don't* have a habit of tying my shoelaces, because I leave the knots tied, kicking off and pulling on my shoes. Or perhaps I wear loafers. Just as an agent can possess a practical capacity imperfectly (or possess an imperfect practical capacity) without being in the habit of exercising it, so she can be in the habit of exercising a practical skill

without detriment to its status as a skill: a concert pianist may be in the habit of practicing before breakfast, yet this has no tendency to cause her expertise to “ossify and decay.” She has a practice routine, yet her practice is not routine (it is skilled and thoughtful): it is crucial to distinguish these uses of “routine.”

The kind of contrast that Annas seeks to draw between intelligent skills and unintelligent habits and routines is, I think, best drawn between skills and their imperfect correlates. It is thus a distinction drawn within the concept of a practical capacity—or indeed, within the concept of a practical skill. It is not a contrast between two types of capacity, but between perfect and privative instances of the same type of capacity. If the intellectual superiority of skill over “habit” and “routine” is articulated in this way, logical space opens for the idea that there may be intelligent habits in the other sense of “habit”—that is, intelligent dispositions of the will.

And surely this is what virtues are. Indeed, the contrast between capacity and habit (i.e. between what someone *can* do and what she *does* do) can be drawn in terms of knowledge: whereas the skilled agent knows *how to* do something (or *how not to* do it), the generous person *knows to* put others first and the just person *knows not to* take more than her fair share.⁵⁹ The skilled pianist *can* play the piano in that she *knows how to* play the piano, and the relevant knowledge, properly understood, is nothing other than her ability. The generous person *puts others first* in that she *knows to* put others first; the just person *does not take more than her fair share* in that she *knows not to* take more than her fair share. The *knowledge to* (and *knowledge not to*) of a virtuous person is nothing other than her habit: the excellent determination of her will or power of choice. Here we surely have a conception of habit completely at odds with the one Annas contrasts with skill: it is hardly mindless, for it is a form of knowledge. Thus, like a skill (an intelligent capacity), an intelligent habit would be a disposition of which Articulacy is the form of its Immediacy.

There will be a tendency, as there is in the case of knowing how to, for some philosophers to want to reduce this *knowing to* and *knowing not to* to propositional knowledge, *knowing that*: “S knows to ϕ ” might be transformed into “S knows that one ought to ϕ ”. I think this can be seen to be false: if you were teaching a child to share with her little brother, then success on your part would be the child’s *having learned to* share with her brother, and thus her *knowing to share with him*. But you would not have succeeded in teaching the child to share with her brother if it hadn’t become the case that *she shares with her brother*: thus her knowing to share with her brother and its being the case that she shares with him are the same reality (remember that *that she shares with him* does not entail *that she is sharing something with him right now*). If you have brought it about that she shares with her brother but does not know to do so, then you have not *taught* her to share with her brother; you have *conditioned* her to do so. (Or rather, you have conditioned her to exhibit a pattern of behaviour that simulates sharing.) By contrast, someone might come to know that *he (or one) ought to ϕ* without it being the case that *he ϕ -s*. Hence the philosophical pressures that generate the projects that virtue ethicists usually recognize to be misguided: to instill with motivational significance either the *fact* that he (or one) ought to ϕ , or *the faculty by which he apprehends* that fact; or to insist that knowledge of such a

fact must be *supplemented* with some motivation to accord with it—if that knowledge is to hook up with action in the right way. In my view, these are blind alleys; and avoiding them requires making sense of the identity of knowledge *to* (and knowledge *not to*) with habit—that is, of the idea of a rational habit that is itself a form of knowledge.

I certainly do not claim to have made sense of this possibility here.⁶⁰ However, Annas's attempt to display the intellectual structure of virtue by analogy to that of skill risks obscuring it. If skill is essentially—in its intellectual dimension, at least—a matter of knowing *how to*, and not knowing *to* (and what would it be to *know to play the piano?*), then the claim that we understand the intellectual structure of virtue on the model of that of skill suggests that the respect in which “S *acts well*” goes beyond “S *can act well*” is not an aspect of virtue's *intelligence*. That is, the habitual exercise of the will or power of choice that constitutes the excellence of that power that virtue is, but which is not internal to skill, would have to be regarded as not being part of virtue's intellectual structure.⁶¹ To put the point another way: somewhat paradoxically, perhaps, Annas's claim that virtues share the intellectual structure of skills stands in the way of the ancient and perennially attractive thought that virtue is knowledge.

7. Conclusion

Annas's use of the skill analogy fails to make intelligible the idea that virtue is intelligent. This is because her conception of skill does not satisfy both the Articulatory and Immediacy Requirements; it thus cannot make intelligible the idea that *skill* is intelligent. But without that idea, the skill analogy has nothing to work with. I suggested that we can reconcile the Articulatory and Immediacy of skill by recognizing distinctions between *forms* of dispositions (capacities, powers). The idea of a *rational* capacity, on this view, is not simply the idea of a capacity that has a distinctively rational manifestation (rational, skilled, or virtuous action) or a distinctively rational trigger (reasons for action); the idea is rather that rationality (Articulatory) characterizes the capacity–act relation (Immediacy) itself. Aristotle's conception of skill as a rational capacity, as I understand it, has this shape. But on this view, the intelligence of skill—its articulate immediacy—consists in its being a two-way power. As a virtue is not a two-way power, it does not share the intellectual structure of skill (so construed). If the intelligence of virtue is to be vindicated, then, either an alternative conception of the intelligence of skill is needed (one that facilitates the analogy), or the skill analogy must be dropped at a certain point. I sketched—very roughly—the shape that an account of the intelligence of virtue that eschews the analogy might take, one on which virtues are rational, intelligent habits. I conjecture that Annas overlooks this possibility because she conflates two distinct phenomena under the heading of habit: dispositions of the will (habits proper) and imperfect practical capacities. Once the distinction is made, we open up both the possibility that intelligent dispositions of the will might themselves amount to cases of knowledge—not knowing *how to* ϕ , but rather knowing *to* ϕ (or *not to* ϕ)—and, thereby, the possibility that virtue might, after all, be knowledge.⁶²

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1. See Michael Thompson, *Life and Action: Elementary Structures of Practice and Practical Thought* (Cambridge: Harvard University Press, 2008), 158–9.
 2. The characterization of the manifestation of a disposition as a “jack-in-the-box” response comes from Saul Kripke’s important arguments against “dispositionalist” accounts of rule-following. See *Wittgenstein on Rules and Private Language: An Elementary Exposition* (Cambridge: Harvard University Press, 1982), 22–37. Important connections between virtue and rule-following are drawn by John McDowell. See “Virtue and Reason,” *The Monist* 62 (1979): 331–350, cited as reprinted in John McDowell, *Mind, Value, and Reality* (Cambridge: Harvard University Press, 1998), 221–62.
 3. Christine Korsgaard, *Self-Constitution: Agency, Identity, and Integrity* (Oxford: Oxford University Press, 2009), 3. Korsgaard’s worry about the Good Dog conception of the virtuous agent is somewhat different from mine.
 4. McDowell, “Virtue and Reason,” 51.
 5. *Ibid.*, 50.
 6. See Gilbert Ryle, “Knowing How and Knowing That,” *Proceedings of the Aristotelian Society*, New Series, 46 (1946), cited as reprinted in Ryle, *Collected Essays 1929-1968: Collected Papers Volume 2* (London: Routledge, 2009), 234; Ryle, “Teaching and Training,” in *The Concept of Education*, ed. R. S. Peters (London: Routledge and Kegan Paul, 1967), cited as reprinted in Ryle, *Collected Essays 1929-1968: Collected Papers Volume 2*, 468; and G. H. von Wright, *The Varieties of Goodness* (London: Routledge and Kegan Paul, 1963), §VII.4.
 7. Questions concerning what kind of disposition a virtue is have arisen recently in the debate concerning the situationist challenge to virtue ethics. See e.g. Rachana Kamtekar, “Situationism and Virtue Ethics on the Content of Our Character,” *Ethics* 114 (2004): 458–91.
 8. Julia Annas, *Intelligent Virtue* (Oxford: Oxford University Press, 2011).
 9. *Ibid.*, 169.
 10. *Ibid.*, 8–9.
 11. *Ibid.*, 8.
 12. *Ibid.*, 12–13.
 13. *Ibid.*, 14.
 14. *Ibid.*, 15.
 15. Ryle, *The Concept of Mind* (London: Routledge, 1949), where ch.2 argues that action is not made *intelligent* in virtue of being caused a piece of propositional knowledge (or its contemplation), ch.3 that action is not rendered *intentional* or *voluntary* in virtue of being caused by a volition, and ch.4 that action does not count as done *for a reason* or *from a motive* in virtue of being caused by a particular feeling of impulse.
 16. Ryle, *The Concept of Mind*, 54.
 17. *Ibid.*, 42. For further discussion of Ryle, see Will Small, “Ryle on the Explanatory Role of Knowledge How,” *Journal for the History of Analytical Philosophy* 5, (2017): 57–76.

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18. Annas, *Intelligent Virtue*, 13.
 19. Ibid.
 20. Ryle, *The Concept of Mind*, 30–31, 129; Annas, *Intelligent Virtue*, 13–14.
 21. Annas, *Intelligent Virtue*, 14.
 22. See Annas, *Intelligent Virtue*, 13. While Annas says there that, though “[her] driving has become routine...this does not make it mindless: I am still at some level aware of where I am going, since I stop at red lights [etc.],” she goes on to say that “[t]he expert pianist plays in a way not dependent on conscious input, but the result is not mindless routine”—making it seem as if mere routine or habit is, as such, mindless. See Ryle, *The Concept of Mind*: “someone...doing something by pure or blind habit...does not exercise care, vigilance, or criticism,” whereas someone exercising a skill “thinks what he is doing” (30). This “thinking what he is doing” that characterizes the exercise of skill is not an act distinct from that to which the agent is paying heed: “what is being described is one operation with a special character and not two operations” (120).
 23. Annas also emphasizes some key non-intellectual differences between skill (and virtue) and habit, such as the characteristic enjoyment that an agent takes in skilled (and virtuous) activity, and the “flow experience” that occurs therein. See Annas, *Intelligent Virtue*, 70–73; Annas, “Practical Expertise,” in *Knowing How: Essays on Knowledge, Mind, and Action*, ed. John Bengson and Marc A. Moffett (Oxford: Oxford University Press, 2011), 106–108.
 24. Ryle, *The Concept of Mind*, 30–31.
 25. See Andrea Kern, *Sources of Knowledge: On the Concept of a Rational Capacity for Knowledge*, trans. Daniel Smyth (Cambridge: Harvard University Press, 2017), 145, and compare Stina Bäckström and Martin Gustafsson, “Skill, Drill, and Intelligent Performance: Ryle and Intellectualism,” *Journal for the History of Analytical Philosophy* 5, (2017); see also Ryle’s later discussion in his “Teaching and Training”.
 26. Annas, *Intelligent Virtue*, 20.
 27. For further discussion of the centrality of learning skills from teachers, see Will Small, “The Transmission of Skill,” *Philosophical Topics* 42, (2014): 85–111, and Kern, *Sources of Knowledge*, ch.10.
 28. Annas, “Practical Expertise,” 105. As long as a mere habit works, its bearer needn’t know (or care about knowing) how and why it works, or be interested in improving on it; and it doesn’t matter if she is happy to simply stick with doing the thing in question in the way she was shown. But not caring about such things—lacking the “drive to aspire”—would constitute defects in the bearer of a skill, on Annas’s view. See Terence Irwin, “Annas, Julia. Intelligent Virtue,” *Ethics* 123, (2013): 551, for dissent, however.
 29. Annas, *Intelligent Virtue*, 19.
 30. See Annas, “Practical Expertise,” 109.
 31. Ibid., 104.
 32. See e.g. Jason Stanley, *Know How* (Oxford: Oxford University Press, 2011); Jason Stanley and John W. Krakauer, “Motor Skill Depends on Knowledge of Facts,” *Frontiers in Human*

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- Neuroscience* 7 (2013); Natalia Waight Hickman, “Knowing in the ‘Executive Way’: Knowing How, Rules, Methods, Principles and Criteria,” *Philosophy and Phenomenological Research*, (2018).
33. See Small, “Ryle on the Explanatory Role of Knowledge How”; see also Michael Kremer, “Ryle’s ‘Intellectualist Legend’ in Historical Context,” *Journal for the History of Analytical Philosophy* 5, (2017).
 34. Annas, *Intelligent Virtue*, 28.
 35. Hubert Dreyfus, “The Return of the Myth of the Mental,” *Inquiry* 50, (2007): 353; *ibid.*, 356; Dreyfus, “Overcoming the Myth of the Mental: How Philosophers Can Profit from the Phenomenology of Everyday Expertise,” *Proceedings and Addresses of the American Philosophical Association* 79, (2005): 61.
 36. Though for doubts about the Annas–Ryle conception of habit and routine, see §6 below and Will Small, “Practical Knowledge and Habits of Mind,” in *Journal of Philosophy of Education* (forthcoming).
 37. Annas, “Practical Expertise,” 110; see also *Intelligent Virtue*, 28.
 38. Annas, “Practical Expertise,” 110.
 39. *Ibid.*, 111.
 40. Annas, *Intelligent Virtue*, 25.
 41. *Ibid.*, 159–60, my emphasis.
 42. See *ibid.*, 29–30; “Practical Expertise,” 110.
 43. See Eric Marcus, *Rational Causation* (Cambridge: Harvard University Press, 2012), 51–8; Thompson, *Life and Action*, Part I.
 44. See Kern, *Sources of Knowledge*, 163–76.
 45. See Martin Heidegger, *Aristotle’s Metaphysics Θ 1-3: On the Essence and Actuality of Force* (Bloomington: Indiana University Press, 1995), §§14b–15.
 46. See Kern, *Sources of Knowledge*, 176–81, and compare Ryle on the exercise of skill involving and “thinking what one is doing” (see n.22 above). See also G.E.M. Anscombe, *Intention* (second edition, Oxford: Basil Blackwell, 1963) on “the knowledge that a man has of his intentional actions”, §28.
 47. See Plato, *Hippias Minor*.
 48. See Tom Angier, *Technê in Aristotle’s Ethics: Crafting the Moral Life* (London: Continuum, 2010), ch.2.
 49. Philippa Foot, “Virtues and Vices,” in *Virtues and Vices: And Other Essays in Moral Philosophy* (Oxford: Clarendon Press, 1978), 8.
 50. Annas, *Intelligent Virtue*, 2.
 51. Annas—inspired by the Stoics—thinks that “performance and sporting skills” are better models for thinking about virtue than “productive skills,” *ibid.*, 74.
 52. For the claim that skills are local, see *ibid.*, 113. For the claim that virtue is a global skill, see Annas, “Virtue Ethics,” in *The Oxford Handbook of Ethical Theory*, ed. David Copp

(Oxford: Oxford University Press, 2005), 518 and Annas, “Moral Knowledge as Practical Knowledge,” *Social Philosophy and Policy* 18, (2001), 246.

53. Kenny, *The Metaphysics of Mind*, 84.

54. Thompson, *Life and Action*, 164.

55. See Aristotle’s discussion of the hierarchy of *technai* in *Nicomachean Ethics* I.1.

56. This is a difficult idea.

57. Annas, *Intelligent Virtue*, 14.

58. Annas, “Practical Expertise,” 104.

59. On the contrast between “knowing how to ϕ ” and “knowing to ϕ ”, see David Wiggins, “Practical Knowledge: Knowing How to and Knowing That,” *Mind* 121 (2012): 110–13.

60. For further discussion, see Small, “Practical Knowledge and Habits of Mind.”

61. See Annas, *Intelligent Virtue*, 22: “We learn to be brave and loyal, then, in embedded contexts. What happens when we do? As with skill, we learn from a teacher or role model *who shows us how to do something* which we then try to copy for ourselves” (my emphases).

62. Versions of this paper were presented at the Centre for the Study of Mind in Nature at the University of Oslo, the University of Illinois at Chicago, Universität Leipzig, the University of Chicago, and a Conference on Virtue, Skill, and Practical Reason at the University of Cape Town. Thanks to the participants for very helpful feedback.