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Intellectual Perseverance

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"If at first you don't succeed, try, try again." "Nothing worth having ever comes easy." "The race is not always to the swift, but to those who keep running." Visit any website devoted to inspirational quotations, and you are bound to find dozens of similar slogans. The chorus of those who attribute their success to perseverance includes voices from all ages and walks of life, ranging from Lucretius to Steve Jobs, and from Albert Einstein to Julie Andrews. Judging by this refrain, it seems obvious that perseverance is an important key to success in many human endeavors.

But is this ode to perseverance any more than a cliché? Judging by another measure—the relative inattention philosophers have paid to the trait—one could be forgiven for answering in the negative. However, this answer is mistaken. Those willing to dig beneath the slogans will be rewarded with rich insights into the nature of the trait, into its centrality to a range of human activities, and into the relationships between perseverance and other important traits (e.g., courage).

This essay explores the nature and value of intellectual perseverance, specifically *intellectually virtuous perseverance* (IVP). At a first approximation, this character trait is a disposition to continue in one's intellectual projects for an appropriate amount of time, with serious effort, with appropriate thought and emotion, in the face of obstacles to the success of one's projects, and with a motivation for epistemic goods. This trait lies in an Aristotelian mean between the deficiency of *irresolution* and the excess of *intransigence*.[1]

In section 21.1, I set out several vignettes that display IVP in action. In sections 21.2–21.7, I unpack the definition of the trait just sketched. I conclude by suggesting future lines of research.

21.1 EXEMPLARS

It will help to begin our study of IVP by considering narratives of individuals whose actions exhibit the trait. As these cases illustrate, IVP manifests itself in a wide range of intellectual activities.

For instance, some agents persevere in *inquiry*, an activity aimed at the discovery of truths, knowledge, or understanding. Scientific inquiry is a paradigm case, and there are numerous examples of IVP throughout the history of science. For instance, Isaac Newton labored tirelessly to develop the calculus needed to build his theory of physics. (Students must exercise perseverance just to *learn* calculus. Imagine *inventing* it!) Thus, the title of Richard Westfall's (1980) prominent biography—*Never at Rest*—isn't just a pithy reference to Newton's First Law. It aptly describes the man himself.

Of course, science has no monopoly on virtuous perseverance in inquiry. Those fountainheads of early analytic philosophy—Bertrand Russell and Ludwig Wittgenstein—displayed remarkable IVP, each in his own way. During the summers of 1903 and 1904, Russell awoke to a blank page, rethinking the foundations of set theory in order to solve a puzzle (Russell's Paradox) that he himself had posed (Battaly 2017). Wittgenstein composed his *Tractatus* as a prisoner of war during WWI (Monk 1991).

Cases of IVP exercised in the midst of inquiry come readily to mind. Indeed, they are so widely available that they can obscure other manifestations of IVP. The trait also appears: (1) in the accumulation of knowledge and skills *prior to* and for the sake of some specific inquiry, (2) in the *retention* of epistemic goods, and (3) in the *dissemination* of epistemic goods.

Intellectually virtuous perseverance is often needed for an epistemic agent to acquire the prerequisites for some specific inquiry. As with other acts and exercises of IVP, cases of type-(1) can involve different kinds of obstacles. Some obstacles are *external* to the agent. For example, Frederick Douglass overcame slavery, poverty, and racism—externally imposed obstacles which made formal education hard to attain for blacks of his time. Douglass, whose master forbade him to be educated, sought to overcome this through self-education, conducting his studies in secret and marshalling his own resources. On several occasions, he went so far as to trade bread to neighborhood children in exchange for reading lessons (Douglass 1982: 82). By these means, he quickly educated himself, reading increasingly difficult books until at last he found himself fully stocked with the intellectual supplies needed to construct the case for abolition.

In other cases, IVP is exercised as an agent overcomes *internal* obstacles to cognitive goods. Such obstacles include self-doubt, confusion, distraction, discouragement, and some disabilities.[2] Helen Keller famously overcame blindness and deafness in order to learn how to communicate and receive communication. Deprived of faculties that most of us take for granted, Keller fought tenaciously to develop abilities (principally her sense of touch) that could serve as proxies for sight and hearing. Her teacher, Anne Sullivan, attests to the young Helen's resolve: "She was unwilling to leave a lesson if she did not understand it all, and even at the age of seven she would never drop a task until she had mastered it completely" (Brooks 1956: 17). As is well known, this tenacity ultimately resulted in Keller's earning a bachelor's degree and becoming an internationally renowned advocate for the disabled, and for women's suffrage.

Suppose that one manages, whether through sheer grace or hard work, to acquire intellectual goods. Such success does not render IVP unnecessary. In many cases, IVP is needed to *retain* true belief, knowledge, or understanding after it has been gained. Such acts of perseverance fall under type-(2) above. In the early Middle Ages, ascetic Christians founded a number of monasteries as they retreated from the pressures of the workaday world and from a wave of invasions. In these monasteries, the descendants of an illiterate people took to reading and copying books, from the Bible to the great works of the Greeks and Romans. Consider their task: to transcribe books by hand. Once they made their own copies, they

began making copies for others. To protect the books from invaders, the monks sometimes buried them in haste, or sent them to more secure monasteries. Many works and much knowledge might have been lost forever, if not for such efforts. It was a noble calling, but the work was arduous, as the monks' marginal notes attest: "I am very cold"; "Oh, my hand"; "Now I've written the whole thing. For Christ's sake, give me a drink" (Dickey 2012). In addition to challenging working conditions, the monasteries were sometimes attacked, despite their remote locations. The monastery at Skellig Michael—a rock island eighteen miles off the Irish coast—was regularly accosted by Viking raiders (Cahill 1995). In the face of danger and drudgery, the monks displayed an admirable love of knowledge—a love that expressed itself as intellectually virtuous perseverance.

The *dissemination* of intellectual goods already possessed, no less than the retention thereof, often requires IVP. These are cases of type-(3). Recall the example of Helen Keller. It is beyond question that her efforts bespeak virtuous perseverance. For now, though, focus not on the pupil, but on her teacher. Once visually impaired herself, Anne Sullivan displayed staggering perseverance in fostering Keller's education. In addition to her physical disabilities, the young Keller was prone to fits of rage, often injuring members of her own family. Sullivan worked with relentless genius in finding and developing methods for instructing Keller, eventually calming the child and teaching her everything from basic vocabulary to arithmetic to Greek literature. All the while, Sullivan insisted that Keller could learn as much as a seeing, hearing child (Brooks 1956: ch. 1). Her care for Keller is expressed in no small part by her concern that Keller acquire such epistemic goods as her condition permitted—an accumulation of goods that far exceeded what many thought possible.

21.2 A DEFINITION OF THE VIRTUE

The examples above provide a kind of acquaintance with the concept of intellectually virtuous perseverance. We now move to analyze the concept. Better: we move to analyze *a* concept of IVP—namely, a responsibilist concept that centers on the agent's motives, beliefs, emotions, and consequent behavior. We do not hereby dismiss the possibility of a complementary reliabilist concept of IVP, on which the trait is a virtue because it consistently produces good epistemic ends. But the analysis of the latter must be left for another paper. The remaining sections will unpack the following definition of IVP as an excellence of intellectual character:

An agent A *possesses the trait* of intellectually virtuous perseverance if and only if A is disposed to continue in A's intellectual endeavors for an appropriate amount of time, with serious effort, with appropriate thought and emotion, in the pursuit of intellectual goods, and despite being aware of obstacles to A's acquiring, maintaining, or disseminating these goods.

Only agents who possess this trait may *exercise* it. However, agents who do not possess the trait may still *act* in a manner characteristic of it, as when they are seeking to acquire the virtue. Agents who possess the trait will not exercise it at all times, but rather as the occasion demands.

21.3 VIRTUES

IVP is one among many *character virtues*, where these include moral virtues, theological virtues, and intellectual virtues. The boundaries between these categories are disputed. But for present purposes we can note the distinctive feature of intellectual character virtues: a

motivation for true belief, knowledge, and understanding, along with an aversion to their opposites: false belief, ignorance, and confusion.

We can better understand the distinctive features of IVP first by distinguishing intellectual virtues from other properties of persons, and then by attending to the behavioral and psychological features of IVP that distinguish it from other intellectual virtues. The remainder of this section concerns the first of these tasks.

Character traits, including virtues, differ from other properties of agents:[3]

- An agent's *faculties* (e.g., her eyesight and reasoning capacities) are clearly features of the agent. But unlike having a character trait, having these faculties requires no specific set of beliefs, motivations, emotions, or action-dispositions. Further, an agent's faculties are innate, whereas her character traits are, in normal cases, acquired.
- Likewise, *skills* and *talents* are not character traits. For example, Jones may be highly skilled at some particular aspect of golf—say, hitting a lob shot over a bunker—but this alone does not speak to her *character*. Smith may have a special musical talent (e.g., perfect pitch). However, knowing this provides little information about the sort of person Smith is.
- By contrast, *character traits* are dispositions of thinking and/or feeling and/or motivation and/or action that ground normative evaluations of persons as such. An agent's character traits express her central beliefs or desires or emotions or motives (inclusive disjunction), and serve to predict and explain how she will act in a given situation. For example, someone with the character trait of honesty will tend to believe that telling the truth is important, will tend to revere the truth, and will tend to tell the truth across a range of situations because of her honesty-relevant beliefs and motives. Character traits reveal the agent's values, and thereby serve as a basis for normative (e.g., moral or intellectual) evaluation of the agent herself. In the case of the honest agent just mentioned, such an evaluation will be positive. In other cases—say, that of a Nazi who hates Jewish people, harbors false beliefs about them, and is disposed to harm them—it will be negative. Some theorists add that character traits are subject to normative evaluation because agents are, to some extent, responsible for the character traits they have (see Miller 2014: ch. 1). Though virtues are included in the class of character traits, they are not alone. There are numerous vices, for instance; and there are arguably traits that lie between virtue and vice, e.g., continence, *akrasia*, and so-called "mixed traits," which are roughly traits involving both good and bad dispositions of thought, or feeling, motivation, or behavior (inclusive disjunction).
- A proper subset of character traits, *virtues of character* are distinguished by way of displaying *excellence* of action and/or thought and/or emotion and/or motivation in a given sphere of activity. They are often found in a mean between extremes (those being *vices*) of excess and deficiency. For example, courage lies in a mean between rashness and cowardice. Finding the mean is commonly taken to require the exercise of *phronesis*, or practical wisdom. The mean itself often differs from person to person within wide, but not limitless boundaries.

It should be clear that intellectual perseverance is not a faculty, skill, or talent. Rather, it is a trait of intellectual character. Moreover, intellectually *virtuous* perseverance is an excellent trait of intellectual character. This it has in common with traits like intellectual humility, intellectual carefulness, and intellectual fairness. To see what distinguishes IVP from other intellectual character virtues, it will help to consider both the vices it opposes and its specific psychological profile.

21.4 IVP'S VICE COUNTERPARTS

Intellectually virtuous perseverance stands between the deficiency of intellectual *irresolution* and the excess of intellectual *intransigence*. The irresolute agent quits too early on his projects, as when the college freshman drops out two weeks into the Fall semester after having received his first C+; or when the high school student opts out of a basic math assignment, instead taking to the internet to discuss the latest Hollywood fashion failure. By contrast, the intransigent agent quits too late, or not at all. Here we might think of misguided searchers looking for El Dorado, or of those Modern thinkers who clung tenaciously to the project of squaring the circle.

   Agents who display IVP avoid the vices of irresolution and intransigence. We can readily identify examples of each trait, which suffices to show that there are clear distinctions among them. But what exactly distinguishes IVP from these vices, and from other traits (including other intellectual virtues)? What constitutes an *appropriate* amount of time pursuing an intellectual project in the face of obstacles? To answer, it will help to consider the distinctive excellences of *behavior, thought, motivation*, and *emotion* displayed by agents with IVP. Looking for differences along these dimensions will enable us to distinguish between cases of irresolution, intransigence, and virtuous perseverance, and to distinguish IVP from other intellectual virtues.

21.5 MOTIVATION, BEHAVIOR, AND OBSTACLES

We can start by considering the *motivation* behind IVP. Whereas dispositions of behavior, thought, and/or emotion distinguish intellectual virtues from one another, dispositions of motivation unify such virtues. The intellectually virtuous agent—including the agent with IVP—will seek to acquire, and/or maintain, and/or disseminate true beliefs, rational beliefs, instances of knowledge, and understanding. The virtuous thinker will also seek to avoid such epistemic pitfalls as false belief, irrational belief, confusion, and ignorance. Moreover, such an agent will not be ill-motivated. For example, she will not desire epistemic goods merely or primarily as a means to an end like wealth, fame, or a good grade.

   To individuate intellectual character virtues, we must consider the voluntary *behavior* that each virtue embodies. For instance, the intellectually courageous person seeks intellectual goods despite fears or threats to her well-being (Baehr 2011: ch. 9). The humble person admits his limitations and accounts for them (Whitcomb et al. 2017). With respect to IVP, the characteristic behavior is continuing one's intellectual projects for an appropriate amount of time, in the face of obstacles to one's gaining, retaining, or disseminating epistemic goods.

   For such perseverance to be virtuous, the relevant obstacles must make it difficult for the agent to reach her intellectual goal. There is no canonical list of difficult obstacles. Indeed, obstacles are as varied as cognitive agents and their circumstances. However, the examples cited in section 21.1 alone suggest an abundant menagerie: the sheer challenge of the project itself, the distraction of war, poverty, slavery, racism, obstinacy on the part of interlocutors, mental or physical disability, social ostracism, a lack of resources, poor working conditions, depression, and discouragement.

   Resistance to difficulty, in part, explains why virtuous intellectual perseverance is an excellence. We admire agents who persist despite difficulty, and other things being equal, we admire them in proportion to the degree of that difficulty. We do not admire agents who merely continue in their tasks without difficulty. One can persist slothfully, or one

can persist in a task that is very easy. Such cases embody perseverance of a sort, but don't thereby embody IVP because such efforts are not excellent. The student who takes days to complete math homework that could be completed in minutes does not deserve a trophy for his perseverance—not even a participation trophy. Thus, "intellectual perseverance" and "intellectually virtuous perseverance" are not synonymous—the set of virtuously persevering acts (or agents) is a proper subset of persevering acts (or agents).

What is difficult for one agent may not be difficult for another. Solving a calculus equation may be difficult for a student but not difficult for his professor; composing a letter in Greek may be hard for the typical New Yorker, but not for a citizen of Athens. And so on. This implies that what counts as an obstacle to intellectual success—and thus what counts as *virtuous* perseverance—will vary from person to person. This variance may be narrow for the maximal degree of IVP, but is arguably broader for meeting the minimal qualifications for the virtue. In all cases, however, IVP requires resistance to obstacles that make it difficult for the agent to achieve her aim.

Virtuous resistance to difficulty does not require *success* in achieving one's intellectual goals. Success may depend on luck, or on the actions and attitudes of others. Where these others prevent the success a project, this need not undermine our judgment that an agent virtuously perseveres. Consider figures like Elizabeth Cady Stanton and Susan B. Anthony, who fought side-by-side for the cause of women's suffrage during the second half of the nineteenth century. Because of resistance from their opponents, Stanton and Anthony did not succeed in convincing the nation of the importance of women's rights, at least not in their own lifetimes (Gornick 2007). However, this does not keep their perseverance from counting as virtuous. Rather, it speaks to the extreme difficulty of the task that the suffragists undertook—a difficulty that supports the attribution of virtuous perseverance in light of their efforts.

If the above remarks are on target, then the characteristic behavior of intellectual perseverance is continuing in one's intellectual tasks despite obstacles. We have already seen that not all such behavior is virtuous—some of it is intransigent. Thus, W.C. Fields purportedly quipped, "If at first you don't succeed, try again. And then quit. There's no sense being a damn fool about it." *Phronesis*, or practical wisdom, is the virtue needed to avoid such folly. The practically wise person will employ this virtue in making rational judgments about which projects are worth continuing—and thereby which acts of perseverance are intransigent and which are virtuous. Thus, we can further tighten our grasp of IVP by attending to the patterns of thought that characterize practically wise—and thereby virtuous—perseverance.[4]

21.6 BELIEFS

The beliefs of the virtuously persevering agent distinguish her from agents who lack IVP. Such beliefs concern the likelihood that the agent's intellectual projects will succeed, the obstacles that the agent must overcome, and the value of the agent's projects. Let's consider these in turn.

Beliefs about Prospects for Success. Some beliefs are incompatible with an agent's displaying virtuous perseverance. IVP seems to rule out irrational belief that a project will succeed. For instance, Hobbes and friends had strong reasons for thinking that their circle-squaring project could not succeed long before they ceased the project. That they persisted despite having this evidence explains why we judge them to be intransigent. Similar remarks apply to those who continue to search for the Fountain of Youth, or who continue to seek a proof that the Earth is flat.

IVP rules out irrational belief in a project's prospects for success. It does not follow that IVP requires a rational belief that one's project will succeed. Consider an analogy from the literature on epistemic justification. Epistemologists agree that if a belief, B, is justified, it must not be defeated—the person who holds B must not have evidence showing that is B false, or showing that the grounds on which B is based are inadequate to justify it. It does not follow that in order to be justified, B must be based on positive evidence. Nor does it follow that, for B to be justified, the person who holds it must believe that B is justified. Rather, such additional requirements must be supported with arguments that are independent from the "no-defeater condition" on justification (Bergmann 1997). Similarly, it does not follow from the claim that IVP rules out irrational belief in a project's success that it therefore requires a rational belief that a project will succeed.

Beyond ruling out irrational belief in a project's success, what might IVP require by way of belief on the agent's part? Below are several natural but mistaken suggestions.

>   *Suggestion 1*: IVP requires that the agent, A, rationally believes that A will succeed in drawing the project to completion.

To see that this suggestion is too strong, consider an agent who is part of a large team of researchers devoted to curing a dreaded disease. Success will require a sustained collaborative effort on the part of many individuals. Aware of this, our agent does not believe that she herself will complete the project. She need not thereby fail to exhibit IVP.

Here is a weaker claim:

>   *Suggestion 2*: IVP requires that the agent, A, rationally believes that A's efforts will contribute to meaningful progress on the project.

This suggestion is still too strong. Consider, again, an agent working with a team to cure a terrible disease. Suppose she does not rationally *believe* that she is contributing to meaningful progress on the project. Suppose it's not yet clear that the disease is curable, and thus not clear whether meaningful progress toward a cure *can* be made (suppose she suspends judgment about this). So long as there is still some reason to think that progress is possible—this is a "live option"—our agent may still have IVP, despite lacking the belief identified in Suggestion 2.

Next, consider:

>   *Suggestion 3*: IVP requires that the agent, A, rationally believes that A's project will succeed, one way or another.

The case discussed in connection with Suggestion 2 also makes trouble here. More generally, not all worthwhile intellectual projects are such that, from beginning to end, the relevant evidence renders their success more likely than not. Provided a project is sufficiently important, a more modest rational belief—e.g., that the project *can* succeed, or that success is not prohibitively improbable—may suffice to keep the agent from intransigence.

Here is another try:

>   *Suggestion 4*: IVP requires that the agent, A, rationally believes that A's project is *likely* to succeed.

This suggestion is also too strong. Especially at the outset of an inquiry, there may be no way to tell whether a project is likely to succeed. Imagine a physicist starting research on a "theory

of everything." If any intellectual project is valuable, she reasonably thinks, then this one is. The inquiry is worth a serious, sustained attempt. But, we may suppose, whether the project will succeed depends on the development of new techniques and technologies—and it may be a toss-up whether these are forthcoming. It seems hasty to say that our physicist lacks IVP if, acknowledging all this, she begins the project and continues for a sustained period. For if we say that about her, we'll have to say it about any number of important scientific inquiries that succeeded despite their success appearing rather unlikely at various moments.

By way of belief regarding a project's prospects for success, then, the following seems plausible:

> *Suggestion 5*: IVP requires that the agent, A, rationally believes that the success of A's project is a live possibility (is not prohibitively improbable).

This is not the place for a full defense of the claim. But the suggestion is more plausible than its predecessors on account of its relative modesty. Moreover, it does not seem *too* modest. Arguably, a belief to the effect that a project can succeed is needed to explain why an agent would proceed with the project. Without some such belief, it is hard to see what would guide the agent into the inquiry in the first place. And if an appeal to some such belief is necessary, then it seems that the belief must be rational—for otherwise it is difficult to see how the agent's persevering could be virtuous. We need not suppose that such a belief is conscious or regularly occurrent—only that the agent has it, and that it can thereby play a role in explaining why she perseveres. (Those who find Suggestion 5 too strong are free to substitute something weaker. Perhaps an agent could possess IVP if she met all the other conditions for trait, but merely had a *disposition to believe* in the possibility of her project's success. For present purposes, we leave this to the side.)

Let us consider one final suggestion, drawn from recent work on the psychology of academic tenacity:

> *Suggestion 6*: IVP requires a growth mindset; that is, it requires that the agent, A, believes that A's abilities can be developed through dedication and hard work.

Carol Dweck and colleagues suggest that intellectual perseverance ("academic tenacity") requires a growth mindset—a view that in turn implies that intellectually *virtuous* perseverance requires a growth mindset (Dweck, Walton, and Cohen 2014: 4). Dweck has amassed a wealth of research demonstrating strong correlations between a growth mindset and intellectual perseverance. This work is of paramount importance for anyone who studies IVP. However, note two points (see Battaly 2017 for discussion of both). First, if IVP requires a growth mindset as a conceptual necessity, it becomes inexplicable why one would conduct expensive empirical studies in order to show that a growth mindset is positively correlated with IVP. Such a procedure would be like interviewing bachelors in order to find out if a high percentage of bachelors are unmarried. Second, it seems we can imagine cases of IVP in which an agent does not have a growth mindset. Suppose, for example, that an agent has never even considered whether her abilities are fixed or malleable. She rationally believes, however, that her project can succeed, and she meets all of the other requirements for IVP. Does the lack of a growth mindset disqualify her from having IVP? It is hard to see why.

Beliefs about Obstacles. Consider next what IVP requires with respect to an agent's beliefs about the obstacles he is encountering. Heather Battaly (2016) suggests that virtuous perseverance requires reliable *perception* of the relevant obstacles. That is, it requires that the agent reliably believe that obstacles to intellectual success are present when they are present,

and not believe such obstacles are present when they are absent. On this account, an agent who persists in inquiry in the face of danger without even recognizing the danger will not count as possessing IVP. Going the other direction, Battaly's account requires that agents not "perceive" obstacles to intellectual success when these are absent. So, e.g., a beginning graduate student who believes that a middling grade on his first paper spells the end of his academic career will not, in so thinking, display IVP.

Any complete account of IVP must consider what the virtue requires by way of belief (or non-belief) in obstacles to intellectual success. In this respect, Battaly's view is an improvement on earlier accounts (e.g., King 2014a) that neglect this point. Battaly's view explicates reliability in tracking obstacles in terms of *belief*: agents with IVP believe that obstacles are present (when they are) and do not believe obstacles are present when they are not. Here is one sort of case that may apply pressure to this account. Consider an agent who persists in the face of obstacles, but who is so consumed with his intellectual task that he doesn't form the belief that obstacles are present. Intellectual goods have his undivided attention, so he doesn't "look up from his work" to consider whether obstacles are present. However, if prompted, he *would* form the true belief that obstacles are present. Can such an agent display IVP? If so, then a requirement slightly weaker than Battaly's may be accurate: agents with IVP must have a *disposition to believe* that obstacles to success are present, when they are.

Beliefs about the Project's Value. As noted above, *phronesis* is needed to discern whether a project is worth continuing, and thereby whether continuing is virtuous. This sort of practical wisdom must consider the prospects for a project's success. It must also consider the *importance* of the project itself—for not all projects that are likely to succeed ought to be pursued. The virtuously persevering agent must rationally judge that the project is valuable to some significant extent, and judge that it is more valuable than other projects she might undertake instead. In the absence of strict criteria for determining just *how* valuable a project must be, or how much more valuable it must be than its competitors, we can at least say the following. Other things being equal:

- projects involving a large number of intellectual goods will tend to be more valuable than those involving just a few such goods;
- projects involving intellectual goods that foster understanding of human flourishing will tend to be more valuable than those that do not; and
- projects that are conducive to *secure* intellectual goods (e.g., knowledge) will tend to be more valuable than projects that deliver risky ones (say, minimally rational beliefs).

These all-too-brief remarks fall short of providing a decision procedure for distinguishing between practically wise (and thereby virtuous) perseverance from non-virtuous perseverance. Each point listed above deserves further exploration in its own right; as they stand, these points are mere placeholders. They nevertheless signal the kinds of considerations that are relevant.

21.7 EMOTIONS

In many cases, agents who display IVP have specific emotions that correspond to the difficulty of their projects. They may be discouraged, daunted, afraid, frustrated, despairing, angry, and the like. It is plausible that in most cases in which an agent virtuously perseveres, he or she registers the relevant obstacle emotionally. It is also plausible that such emotional

states are conceptually connected to IVP. Certainly this holds for some species of IVP. For example, intellectually-courageous-perseverance-despite-fear is impossible without the fear that partly constitutes it.

But do all instances of IVP require some such specific emotional response? Battaly (2016) argues that a proper emotional response to intellectual obstacles may be necessary for IVP. As a general point, this is correct: virtuous perseverance does seem to rule out emotional responses that are long-standing, irrational, or extreme.[5] (This is not to say that IVP is incompatible with an agent's having, say, irrational fears during *some* part of an intellectual project. See King (2014a); compare Battaly (2016).)

Battaly's account is stronger than this, however, as it suggests that perseverance requires an agent to be to some significant extent "daunted" by obstacles to intellectual goods. By contrast, King (2014a) does not embrace this as a requirement on virtuous perseverance—opting instead for an account that allows for virtuous perseverance in some cases where the expected emotional response is absent, and even where the agent does not have a negative emotional response to the relevant obstacles.

Battaly argues that the lack of an emotion requirement renders King's account too weak. She cites inquirers—including Col. John Paul Stapp, Roger Bannister, and David Pritchard—who conducted experiments on themselves while apparently remaining undaunted by the pain and danger they thereby courted. Stapp regularly put his life on the line while conducting high-speed tests aimed to help researchers better understand the mechanics of airplane ejection seats and safety harnesses. In order to understand the physiological effects of inhaling oxygen-enriched air, Bannister subjected himself to painful pinpricks while breathing through a mask and climbing to exhaustion on a steeply inclined treadmill. Pritchard infected himself with hookworms in order to test the worms' effect on autoimmune reactions. Battaly argues that these inquirers satisfy King's requirements on IVP, but do not exhibit *virtuous* perseverance: "arguably, a person with the character virtue of IP *would* be perturbed and daunted by the prospect of conducting such experiments on herself" (2016: 19). In light of this, Battaly suggests that "the character virtue of intellectual perseverance *may* require a disposition to respond to obstacles with an appropriate degree of confidence or trepidation" (2016: 23). That is, "the virtue of intellectual perseverance may also require a disposition to be appropriately daunted by (and confident with respect to) obstacles, as the context demands" (n. 55). In Battaly's estimation, Stapp, Bannister, and Pritchard do not meet this requirement.

How might we advance this discussion? First, we might delve more deeply into the psychological facts about Stapp, Bannister, and Pritchard. If these figures *were* daunted in the face of their experiments, then by Battaly's lights, they would count as displaying IVP, and not merely perseverance.[6] However, even in the best-case scenario, this leaves it open whether there are other possible cases in which agents satisfy all of King's requirements on IVP, and yet fail to be virtuous for want of the appropriate emotional reaction. So the strategy is of limited value for illuminating the nature of IVP.

Second, we might test Battaly's suggested requirement. To set the stage for this, note that while character traits are *typically* understood as dispositions of behavior, thought, motivation, *and* emotion, not all character traits seem to require all of these components. As Miller (2013: 7) notes, traits like foresight and closed-mindedness may only involve belief states without desire states; traits like being analytical and logical seem not to require dispositions toward bodily behavior. Such examples should leave us open to the possibility that intellectually virtuous perseverance—or at least some species of it—does not require a specific emotional response.

A more direct approach is to consider cases like the following:

> Jones is working to solve a difficult mathematical conjecture. The truth or falsehood of the conjecture is very important to Jones's intellectual community. Further, Jones is one of the only people within the community likely to have the ability to prove (or disprove) the conjecture. It is unclear whether the conjecture can be proven, but there is no strong evidence that it cannot. For years, Jones works from 8–5 daily, apparently making mild progress, but without a clear breakthrough. During this time, Jones skillfully balances her research with her other obligations, including intellectual obligations. She regularly considers whether she should continue the project, carefully weighing the benefits of continuing against those of adopting other projects instead. She is fully aware that the problem is difficult, and on an intellectual level, she registers the obstacles to success. However, she does not register these obstacles emotionally. She is not daunted, afraid, discouraged, or frustrated (though many of us would be, were we to encounter similar obstacles). Instead, Jones simply continues to work at the problem, keeping squarely in mind the intellectual goods she seeks. Where negative emotions might otherwise arise, Jones finds herself excited about the possibility of new knowledge, and cautiously optimistic that further work will yield a breakthrough.

Is Jones's perseverance virtuous, despite her lack of negative emotion? King's account suggests that it is; Battaly's account may suggest otherwise, especially if it is read to require that appropriate emotional responses to obstacles be negative.

One reason for caution about a strong emotional requirement is that it seems desirable to ensure the distinction between a variety of IVP—perseverance *proper*—and varieties of IVP like intellectually-virtuous-courage-in-the-face-of-fear (King 2014a: section 3). Traits of the latter sort require a specific, negative emotional response to obstacles, especially fears and threats. But it seems that there are possible cases of IVP, like that of Jones above, in which a virtuously persevering agent has no negative emotional response to obstacles, and where the lack of such a response is appropriate. So on the one hand, one might worry that a negative emotional requirement will rule out such cases, thus making an account of IVP too strong. On the other hand, there is Battaly's concern that the lack of an emotional requirement will make an account too weak. Here is a suggested rapprochement, which involves a strengthening of King's account and a mild clarification of Battaly's:

> IVP requires a disposition to respond to obstacles in an emotionally appropriate way, but does not require in all cases that this response be negative.

This suggestion helps ensure the possibility of IVP proper (King's concern) while keeping the account suitably strong (Battaly's concern).

21.8 REMAINING QUESTIONS

Substantive inquiry into the nature, benefits, and cultivation of IVP is just beginning—at least among virtue epistemologists. Let us therefore close by noting several questions that further inquiry might address.

First: How is IVP related to other intellectual character virtues? Clearly, the trait is closely linked to intellectual courage, at least in cases where threats and fears serve as obstacles to

intellectual success (King 2014a; Battaly 2017). But how might intellectual perseverance relate to such traits as open-mindedness, fair-mindedness, and intellectual charity? After all, many of us find it difficult to sustain open-minded, fair, charitable views, especially in the face of disagreement. On the face of it, IVP is highly relevant to overcoming such obstacles to the virtuous pursuit of epistemic goods—but the details of these relations have not yet been explored. (But see Battaly 2017 for discussion of the relationships between IVP and self-control.)

Second: What, if anything, lies between the virtue of IVP and its corresponding vices? Suppose an agent lacks IVP. It does not follow that she is therefore vicious. She may lack IVP for any number of reasons, and not all of these need indicate vice. Suppose she is motivated to pursue epistemic goods, but the right behavioral dispositions have not yet taken hold. She may in that case suffer from *akrasia* rather than irresolution. Or suppose she has and exercises the right behavioral dispositions, but does so despite a strong desire to skip her homework and watch Netflix. We need not regard her as *vicious*—perhaps she is *continent*, but not fully virtuous. These and other possibilities deserve further exploration.

Third: How is IVP related to traits often studied by psychologists (e.g., grit)? As Battaly notes, there is significant overlap between well-known psychological work on grit and philosophical treatments of IVP. Psychologist Angela Duckworth (2005, 2007, 2016) defines grit as perseverance and passion for long-term goals. She and her colleagues have shown that this trait is highly correlated with academic achievement. Grit, for instance, outdoes IQ as a predictor of student grades. However, thus far, virtue epistemologists have defined IVP so as to render the trait broader than grit, because IVP, but not grit, may concern relatively short-term goals (Battaly 2017). Further, IVP as thus far defined by virtue epistemologists is also *narrower* than the psychological notion of grit, because IVP conceptually requires that the relevant goals include epistemic goods, and because it requires practical wisdom in judging the worthiness of continuing a project in light of its prospects and importance. Strictly speaking, grit is not restricted in these ways.

Finally: How many of us have IVP? And, how might we foster IVP in ourselves and in our communities? Philosophers dispute the extent to which intellectual virtues are distributed across the population. Some have cited empirical research in support of the claim that such virtues are rare (e.g., Alfano 2012). Others have questioned whether the empirical research suffices to establish this claim (e.g., King 2014b, 2015). However this debate turns out, philosophers in both camps should take a keen interest in methods for cultivating meaningful growth in IVP—for surely many thinkers would benefit from having more of the trait than they currently have. In learning how to develop IVP in ourselves and others, philosophers will want to move beyond simple advice to practice the virtues, seek exemplars, and pay attention to direct instruction. Such approaches are a good start. But empirically informed approaches are readily available, many of which have been shown to increase perseverance behavior (Duckworth 2016). Of course, these approaches, as approaches to fostering perseverance behavior, may not suffice to foster IVP. For that, it will also be necessary to foster intrinsic motivation for epistemic goods (on this see Dweck et al. 2014), and to foster practical wisdom—otherwise, attempts to foster IVP may instead yield mere continence, or a mixed trait, or even the vice of intransigence.

We have merely dug our first spoonful. The depths of intellectually virtuous perseverance have yet to be mined. However, even our modest exploration should make it clear that further digging is worthwhile, and is likely to yield further insights. For virtue epistemologists, it would be irresolute to quit now.[7]

(Related Chapters: 4, 20, 36, 38, 39.)

NOTES

1 As Battaly (2016) points out, inasmuch as exercises of intellectually virtuous perseverance may reliably enable agents to achieve knowledge and true belief, IVP may not only be an intellectual character virtue, but also a "faculty virtue" of the sort featured in reliabilist virtue epistemologies, on which see (e.g.) Sosa (1991, 2007, 2009).

2 Of course, this does not imply that those who suffer from disability lack strengths that the rest of us possess. In many cases, the opposite is true. For instance, Anne Sullivan noted that Helen Keller's disabilities forced Keller to develop intellectual volition and concentration rarely found in "normal" individuals (Brooks 1956: 28).

3 For help with the distinctions drawn in this section, I am indebted to Heather Battaly (2010a, 2015, and discussion) and Christian Miller (2013, 2014, and discussion). Miller discusses mixed traits with respect to morality, but the notion of a mixed trait may arguably be applied to responsibilist-style traits of intellectual character.

4 Battaly (2016) treats *judgment* and *perception* separately, while I combine these under the category of *thought*. I distinguish between thoughts about prospects for success (Battaly's "judgment") and thoughts about obstacles (Battaly's "perception"). As far as I can tell, nothing substantive depends on how the territory is divided. Both Battaly and I are considering subjects' beliefs about their projects, and their reasons for holding these beliefs.

5 King (2014a) is inadequately explicit on this point; Battaly (2016) helpfully suggests the improvement noted here.

6 On this see Ryan (2015), who reports that Stapp was often in a bad mood prior to experiments (p. 1), relieved when experiments weren't as painful as expected (p. 104), and was sometimes depressed after the experiments (p. 113), perhaps due to the physical rigors of the experiments themselves.

7 Thanks to Heather Battaly for generous and helpful comments on a previous draft of this chapter, and to Christian Miller for helpful discussion.

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