

# 12

## Moods and their Unexpected Virtues

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### 12.1 Introduction

The theory known as “mixed virtue epistemology”<sup>1</sup> is catholic with respect to the intellectual virtues it incorporates. Warring “reliabilist” and “responsibilist” theories, by contrast, are more restrictive in their specifications of what qualifies as an intellectual virtue. No sharp characterization of these outlooks has been agreed upon, but *reliabilists* tend to focus on the processes and capacities associated with certain faculties, such as perception and memory, whereas *responsibilists* focus on traits that regulate inquiry and manifest the agent’s truth-seeking dispositions. Standard examples include conscientiousness and open-mindedness. Mixed theorists jettison this traditional dichotomy, and so avail themselves of a richer set of theoretical concepts.

Two major challenges face mixed views. The first is to provide a plausible account of what unifies the seemingly disparate intellectual virtues under a single heading. The second is the situationist challenge, which calls into question the normative status of both reliabilist and responsibilist “virtues.” In what follows, my intention is not to defend any particular version of the mixed theory. Nor will I go beyond existing responses to the unification question. I focus, instead, on the situationist challenge as it arises for mixed views. In particular, I argue that certain processes and capacities grounded in the *affective* system constitute intellectual virtues, and that recognizing them as such equips mixed theorists with the resources required for meeting the situationist challenge in at least one of its guises.

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## 12.2 Identifying the Intellectual Virtues

How do we identify the intellectual virtues? One traditional response to this question begins by locating those aspects of our cognitive architecture that enable us to flourish intellectually. One way to address this inquiry is to identify what we might call the “intellectual function” of human beings. It should then be possible to specify those features of our cognitive architecture that enable us to perform our intellectual function well, and thus to flourish intellectually.

As an illustration, consider Ernest Sosa’s suggestion that “grasping the truth about one’s environment” is among the “proper ends of a human being” (1991: 271). This suggestion favors an emphasis on the belief-forming processes associated with certain faculties and, specifically, their reliability (or truth-conduciveness). A belief-forming process is reliable when it produces a preponderance of true beliefs over false ones. If this is right, then the *reliability* of a faculty—or rather its associated belief-forming process—is one property that enables us to recognize truths about our environment and therefore to perform this particular function well.

Sosa’s suggestion is a plausible one, but a familiar criticism of focusing too heavily on this desideratum is that reliability fails to protect against ignorance (Goldman 1986: 122). The belief-forming process associated with a faculty could produce very few true beliefs (and no false ones), and it would qualify as reliable. Suppose, then, that someone had several such faculties and yet still believed only a handful of truths. Such a person would not be well equipped for recognizing a range of truths and would not, for this reason, flourish intellectually.

The above observation calls for a more pluralistic proposal. As Alvin Goldman notes, epistemic success is “measured mainly by solving the problems one is *trying* to solve, not forming a lot of incidental true beliefs along the way” (1986: 124; emphasis in original). For this reason, he proposes as desiderata “power” and “speed,” in addition to reliability (Goldman 1986: 123–4). A *powerful* system is one that enables an agent to obtain a high proportion of correct (and relevant) answers to a wide range of suitably complex questions; or, more succinctly, to solve many problems of all sorts (Goldman 1986: 123). Goldman notes that the perceptual system combined with our attentional capacities are powerful, since in combination they can readily deliver information the agent wants to gather about the surrounding environment (1986: 194). If I want to know what the commotion outside is, I can peer through the window to locate its source and, if that doesn’t work, I might reorient my attention further until the relevant perceptual information is obtained.

Goldman also notes that, all else being equal, the faster one solves a problem, the more problems one can solve in a limited time frame. Thus, the *speed* of the relevant processes and capacities also has the potential to increase the proportion of problems the agent can solve correctly, especially when the task involves time constraints, be they natural or imposed.

Both Sosa and Goldman's approaches are truth-centric. An agent is epistemically successful when she grasps the truth about her environment, according to Sosa, or, according to Goldman, when the agent arrives at the correct solution to a problem, which he glosses as "getting a *true* answer to a question" (1986: 125; my emphasis). Thus, using either approach as our guide would have us say that the intellectual function of creatures like us involves, most centrally, the formation and maintenance of true beliefs. This, I think, is too narrow a conception of the intellectual function of human agents, as I think most mixed theorists would agree.

Christopher Lepock—a proponent of mixed virtue epistemology—expresses a similar reservation when he says:

We want our beliefs to be true, but we don't just want any true beliefs. We want true beliefs on interesting or important matters, that have practical value for us, that explain or help us understand the world (2011: 112).

On this proposal, the intellectual function of human agents is to recognize *significant* truths about our environment.<sup>2</sup> According to this way of framing Lepock's view, the properties of our cognitive architecture that enable agents to perform their intellectual function well are "portability" and "significance conduciveness" in addition to reliability and power. And he takes it that speed is an aspect of portability (2011: 118).

A *portable* process is one that can operate in a wide range of situations (Lepock 2011: 117). Lepock uses the example of his ability to remember the tune "When the Saints Go Marchin' In." He can do this just about anywhere. Belief-forming processes, such as heuristics, are also highly portable insofar as they enable the agent to form true beliefs even in the presence of time pressure or other cognitive constraints. This is why Lepock thinks that Goldman's *speed* is better thought of as instance of portability. I happen to think that speed is important independently of its contribution to portability, but I will return to this point momentarily.

Portability is a tricky notion. To see this, consider the following example. Imagine a person who lives somewhere within the Arctic Circle. It turns out that such a person will get more annual daytime hours (owing to atmospheric refraction coupled with the Earth's elliptical path and axial tilt) than someone living near the Earth's equator. Now, take it as given that when a person has no artificial lighting conditions whatsoever, a well-functioning visual system will generate more true beliefs in the daylight than after nightfall, all else being equal. The following will then be true: functionally equivalent visual processes will be more portable for the person living in the Arctic Circle than for the person living near the equator—again holding other things equal. Indeed, depending on what the threshold for portability is, one person's visual process might be said to be

<sup>2</sup> I should mention that neither Lepock nor Goldman, for that matter, discuss the intellectual function of human agents. I'm not here taking a stand on how best to frame mixed theories. I opted for a framework closest in spirit to traditional virtue theory simply to avoid introducing any further controversial assumptions.

portable, while the other person's is not, even though they both function in exactly the same way. It is conceivable, then, that a functionally equivalent process, capacity, or trait is virtuous for one person and not for another depending entirely on their respective circumstances, and having nothing at all to do with the agent or her cognitive architecture.

Portability, therefore, tells us more about what constitutes ideal (non-ideal) circumstances than it does the features of a process, capacity, or trait that contribute to the agent's intellectual flourishing, and, for this reason, it is less relevant for my purposes. A more fundamental question, however, and one that I am concerned with here is: what features of an agent's cognitive architecture enable that person to flourish intellectually even in non-ideal circumstances? Here I think the neighboring concepts of speed and efficiency are important.

The *speed* at which a faculty enables an agent to process information or the quickness with which a capacity allows one to perform a task are both conducive to problem-solving, especially when time constraints are in place. For the same reason, speed also contributes to a higher proportion of problems solved in a given time frame, as noted above.

An *efficient* process or capacity employs minimal cognitive resources in order to solve a problem. Employing a mnemonic device to remember the name of someone I just met is more efficient than trying to memorize it through repetition, which, among other things, requires prolonged attention and effort. These very same cognitive resources could be put to the task of solving another problem were they not being used for this purpose. Thus, efficiency is conducive to problem-solving when there are other demands on one's cognitive resources or they would be better utilized in other ways.

When a capacity or process is quick and efficient, in addition to manifesting the agent's competence I will say that it is *fluent*—following Peter Railton's (2009) helpful terminology. Railton provides the example of a person's ability to drive a manual transmission. At first, one's driving is clunky, flawed, highly deliberative, and requires tremendous cognitive resources, but eventually it becomes skilled, fluid, flexible, responsive, and nearly effortless (Railton 2009: 81).

Human agents face a number of problems—interpretive problems, coordination problems, and decision problems—that would otherwise be unsolvable were agents only to possess reliable and powerful capacities and processes. This motivates the addition of significance, speed, efficiency, and fluency to the list. (From here forward, I use the phrase “process desiderata” to refer to the entire collection of features (see Lepock 2011: 116).) Perhaps the list could go on, but I've offered reasons for thinking that the process desiderata are necessary for human intellectual flourishing, which is to say that they make it possible for agents to solve problems of many kinds, including the ones they tend to face in their everyday lives.

In sum, the process desiderata are properties of our cognitive architecture conducive to solving a wide range of problems, including ones whose solutions bring about other things of value in addition to true belief. Almost no aspect of our cognitive architecture

will have an equal mix of all of these features. In some cases, for example, a certain degree of reliability may be sacrificed for the sake of speed, efficiency, and significance. Allowing for such trade-offs, it is plausibly the case that the faculties reliabilists favor will make the cut, as will creativity, open-mindedness, and curiosity, among other traits responsibilists favor. I haven't sufficient space to make good on this claim here (although see Lepock 2011). Instead I focus on the processes and capacities grounded in the affective system. I argue that they belong among the list of intellectual virtues that mixed theorists should accept.

### 12.3 The Intellectual Virtues of the Affective System

In several places above, I mentioned the “*cognitive* architecture” of human agents. Cognitive systems tend to be distinguished from affective ones and epistemic notions are usually associated with the former, but not with the latter. I will argue, however, that the affective system is an information-processing system; it also has the power to initiate belief-forming processes in response to that information. If this is right, then epistemic notions ought not be exclusively tied to the “cognitive” domain, narrowly construed. Accordingly, when I discuss the agent's cognitive architecture, I will be concerned with a broader notion that includes any system or trait that is intellectually virtuous. A system or trait is intellectually virtuous, I will claim, just in case the capacities, processes, or dispositions associated with that system or trait possess the features required for an agent to flourish intellectually. These features (again) are: reliability, power, significance, speed, efficiency, and fluency (i.e., the process desiderata).

The main goal of this section is to argue for the thesis that certain capacities and processes grounded in the affective system possess the features required for an agent to flourish intellectually. I begin with an example that helps motivate the general thought that affective states of mind can be epistemically significant.

Consider a case of dubious testimony. Suppose you have a “bad” feeling about whether someone is telling you the truth, and so you subsequently judge them to be an untrustworthy source of information on a certain matter. When described this way, having a bad feeling seems wholly irrelevant to whether the person is in fact untrustworthy. Whether this is correct, however, depends on the source of the feeling. Suppose the explanation for your feeling is that you are subconsciously picking up on subtle cues about the person's verbal and non-verbal behavior, which do in fact indicate that the person is lying to you. These are the familiar “tells”—e.g., blinking, pupil dilation, speech errors, vocalizing in a higher pitch than normal, etc.—that typically occur when a non-pathological liar engages in deception (Knapp et al. 1987). Whether we have reliable dishonesty detecting abilities is another matter that I won't pursue here. The point rather is to illustrate how the affective system might generate feelings that provide the agent with information which could, in turn, initiate a belief-forming process the product of which is a non-accidentally true belief.

This, and other examples like it, support the research program in psychology known as the “affect-as-information” approach. Its guiding assumption, as Hunsinger et al. put it, is that “affective experiences, which result from largely nonconscious, continuously operating appraisal processes, are adaptive and convey important and meaningful information to individuals who experience them” (2012: 221). I will not be able to offer a comprehensive defense of this approach, but I take heart in recent efforts aimed at shedding light on its merits.<sup>3</sup> I turn now to offering a more detailed description of the approach.

### 12.3.1 *The affect-as-information approach*

Affective states come in various guises. There are emotions (e.g., anger, sadness, and disgust), bodily sensations (e.g., those associated with hunger, arousal, and fatigue), in addition to a third category psychologists somewhat misleadingly refer to as “moods”—these are not necessarily manifested by someone who is, for instance, chronically depressed or in the grip of a mood disorder. Rather, what psychologists have in mind here are either positively or negatively valenced feelings.

Emotions can be distinguished from moods along several dimensions. Emotional states are thought to be intentional states—they are directed at certain objects, e.g., people, places, and things. Moods, by contrast, are not intentional states. Sometimes they are described as “free-floating,” but I hesitate to take this metaphor too seriously. While it is true that moods are not inherently about anything in particular, they are nonetheless always tethered to a specific source. Yet, because the source of a mood is not obvious from the affective experience itself, it is possible for the agent to misidentify its source. Suppose, for example, that a job interviewer has low blood sugar because the interview is taking place when he would ordinarily be eating lunch. The interviewer might become aware of a general feeling of dissatisfaction, and go onto attribute it to the job candidate’s performance rather than the real source; namely, his insufficient calorie intake.<sup>4</sup> Other distinguishing features of moods and emotions include: *intensity* (moods tend to be less intense than emotions); *rise time* (moods tend to come about more gradually than emotions); and *duration* (moods may last longer than emotions) (Schwarz & Clore, 2007: 386).

Moods and emotions each play a role in the belief-formation process associated with the affective system. To understand how this process operates according to the affect-as-information approach, it is helpful to break it down into the following subprocesses:

- (1) *The affective response (and implicit evaluation) process*: The affective system produces a mood, emotion, or other affective state in response to an object of a certain kind. These affective states constitute an evaluation of that object.<sup>5</sup>

<sup>3</sup> Peter Railton’s (2014) recent paper stands out in this connection.

<sup>4</sup> This example is adapted from the one given in Schwarz & Clore (2007: 390). I discuss more cases of mood misattribution at length later in the chapter.

<sup>5</sup> I will speak of an “object” in the singular, but the reader should understand “or collection of objects” throughout.

- (2) *The attribution process*: When agents attend to their affective experiences, they attribute those experiences to a certain object (call it “the target”). In the case of moods, agents tend to automatically attribute their mood to whatever happens to be in their focus of attention at the time (Schwarz & Clore 2007: 387). In attributing the affective experience to the target, agents are taking that experience to be a source of information about the target’s evaluative status. (This will be true whether or not the target identified is the very same object that in fact caused their affective experience. In other words, misattribution is possible as illustrated by the job interview case.)
- (3) *The evaluative belief-forming process*: In the absence of countervailing sources of information, an evaluative belief about the target is (presumably automatically) formed.

In what follows, I offer an example to illustrate each subprocess (when each operates error-free), and I focus on moods rather than emotions, as only the former will be directly relevant to the situationist challenge discussed in the second half of the chapter.

The following is an example of how belief formation works on this approach. Suppose in response to having just sat through a two-hour long movie filled with sappy dialogue and comic misfires (and not the meta-funny ones), I am now feeling a bit disgruntled. I may not be immediately aware of my mood, because moods (unlike some emotions) tend to be low in intensity (Schwarz & Clore 2007: 386). Suppose, further, that I’m a “cup-half-full” kind of person, and am, therefore, disposed to focus on the good features in things. Nevertheless, as I’m departing the theater and it’s all sinking in, I realize I am feeling rather irritated. I seem to recall being excited about getting out of the apartment, and I was initially looking forward to the movie. Thus, I rightly attribute my low mood to the annoyingly bad movie. Then, on the basis of this information, I come to believe that the movie wasn’t worth my time.

The example, which is intentionally mundane, illustrates our tremendous reliance on the affective system in forming beliefs about various aspects of our everyday life. These beliefs are not trivial, either, as they inform future decisions and shape the way we navigate the world more generally.

### 12.3.2 *Process desiderata revisited*

If the affect-as-information approach is correct, the affective system initiates an epistemically significant belief-forming process, and thereby earns a place in our cognitive architecture. It may yet be the case, however, that the system creates more problems—from an epistemic point of view—than it solves. This section is dedicated to arguing that this is not so: the belief-forming process associated with the affective system satisfies the process desiderata mentioned in the second section.

I begin with a discussion of the *attribution subprocess*, for it is more vulnerable to error than the other two. My first aim is to argue that existing empirical evidence

fails to show that the attribution process is unreliable. I then briefly make a case for its reliability by means of a counterfactual test.

In a landmark mood misattribution study, Norbert Schwarz & Gerald Clore (1983) asked participants to rate their life satisfaction either on a sunny day (when moods tend to be elevated) or on a cloudy day (when moods tend to be lower than the baseline). Predictably, those questioned on sunny days rated their life satisfaction more positively than those asked on cloudy days. Interestingly, however, Schwarz and Clore discovered that if the questioner mentioned the weather in passing, the effect was removed. The explanation, according to the affect-as-information approach, is that the mere mention of the state of the weather brought home to participants that their current mood likely reflected how they felt on that day, not how they felt about life more generally. In most cases, the participants' recognition of this fact—combined with their background belief that life satisfaction is not simply a function of how well one's life is going on a single day—was sufficient to discourage them from basing their beliefs about life satisfaction on their current mood.

The study highlights a point relevant to evaluating the reliability of the attribution process. It shows that misattribution need not produce false beliefs. Agents sometimes acquire new information that tips them off to the inaccuracy of their attribution, thereby breaking the link between the attribution process and the belief-formation process. An analogous severing can be said to happen when someone observes a multi-colored object, but discounts the informational value provided by her visual system because she is aware of having a color-vision deficiency. Thus, if someone discounts the information based on the misattribution, the truth ratio of the agent's beliefs will remain unaffected. This reassurance may nonetheless be cold-comfort for a number of reasons.

Upon recognizing the misattribution, agents will, in some cases, attempt to compensate. Consider the example given earlier: Imagine that the hungry job interviewer notices that it is well past lunchtime. Imagine, further, that this leads him to recognize that his feeling of dissatisfaction may be owed not to the candidate's performance in the interview, but rather to his low blood sugar crankiness. The risk is that, in attempting to reassess the situation, he may instead overvalue the candidate's performance. Schwarz and Clore note that the empirical literature bears this out: People do tend to overcorrect in situations of this kind (2007: 390). Thus, even if the initial "affect-driven" belief-forming process is disrupted, a new "theory-driven" process may be initiated that eventuates in a false belief anyway.

Another question the original Schwarz and Clore study raises is: How often do these misattributions occur? As noted earlier, agents tend to attribute their moods to whatever they happen to be attending to at the time. But are we not susceptible to all sorts of influences at any given time? And, if so, might we be more likely than not to misidentify the real source of our moods? A superficial survey of the empirical literature would have us believe this is so. I recommend, however, that we proceed with caution.

The psychology literature is filled with misattribution studies, and it is tempting to infer that misattribution must be rampant in non-experimental contexts as well. The first reason for thinking this inference is too quick is that almost all of these studies involve incidental mood-induction or mood-manipulation techniques. In other words, the experimental framework is manufactured so as to guarantee that the participants' mood will be irrelevant to the target. In order for the inference to go through, it would need to be true that our real-life circumstances also conspire to mislead us in a similar way. It is certainly not obvious that they do—or so I will argue.

When manipulating people's moods, psychologists utilize everything from cookies and funny movies to unkempt rooms littered with pizza boxes and unpleasant odors. The moods associated with stimuli of the sort just mentioned tend to be fairly fleeting; so it is less likely that someone would be engaged in a completely unrelated evaluative inquiry, while also under the influence of a fleeting mood. That said, Schwarz and Clore's study should still be a cause for concern because the weather often has more lasting effects on our mood. The worrying thought is that we are bound at some point in the course of a day to engage in an evaluative inquiry while in the grip of one of these moods. This, it seems, would increase the chances of misattribution. Two replies are noteworthy.

First, we do try to avoid engaging in evaluation on important matters when our moods have been effected by the vicissitudes of everyday life. We might, for instance, have a policy of avoiding debates with friends or arguing with a loved one when intoxicated, stressed, or sleep deprived. Second, the relevance of the inquiry matters as well. We might naturally rely on our moods when asked about our wellbeing, but telephone surveys about life satisfaction are quite rare. Furthermore, several studies suggest that we tend to rely on our moods only when they have high information value. Research on consumer decision making, for instance, reveals that people rely on their mood when they have experiential goals (e.g., going to a movie) as opposed to instrumental goals (e.g., going to a movie in order to complete a project) (Pham 1998). Participants also relied more on their mood when they were making decisions for themselves, but not for others (Raghunathan & Pham 1999). Finally, people are more inclined to rely on their mood under time pressure (Siemer & Reizenzein 1998), but are considerably less likely to do so when forming beliefs for which they have a high degree of expertise (Ottati & Isbell 1996; Sedikides 1995). Thus, given that not every evaluative inquiry will prompt one to consider one's mood as a source of information, this should in principle limit the number of misattribution errors in naturalistic contexts.

Of course, estimating the degree to which evaluative inquiries and incidental moods co-occur in real life is ultimately speculative. The existing empirical data fail to provide support for the reliability of the attribution process, but also offer no support for its *unreliability* either.

I turn then to an alternative proposal. One method of discerning the reliability of any process is to consider matters counterfactually: How well would agents navigate their environment—or solve problems of various sorts—if the process failed to operate reliably

or agents lacked the structures that gave rise to such processes? We can run the test on our perceptual capacities: If our visual system were to be unreliable, we would expect far more infelicitous encounters with moving objects in our environment than we in fact have. Similarly, if our affective system were to be unreliable, we would expect more miscommunications, fewer soundly and swiftly made decisions, and fewer competently executed cognitive tasks (or so I argue below).<sup>6</sup> If this is right, the belief-forming process initiated by the affective system enjoys at least some measure of reliability.

Let's turn now to the other process desiderata. It's easier to make a case for the power, significance, speed, efficiency, and fluency of the belief-forming process, so instead of taking each of these in turn, I will describe three types of circumstance where some combination of these desiderata apply. There is nothing remarkable about the choice of examples. On the contrary, it is precisely their garden-variety quality that underscores the importance of the affective system's associated belief-forming process.

I begin with a decision-making context. Suppose I'm shopping for a new HDTV, and I've narrowed it down to two options. I am aware of the minor differences between them, but in the end the pros and cons balance out. The thing for me to do, I conclude, is to spend some time watching each one, and then go with my gut. Arguably, what is going on here is that I form a belief about which product is preferable on the basis of how I feel after I've familiarized myself with the options. If you then ask me to explain my choice, I may not be able to offer a satisfying explanation, but this does not mean my mood fails to track a real difference between the two products. Perhaps one image is slightly more shadowy and the audio has a faint tinny quality to it. If this is right, then, all else being equal, the HDTV I chose is genuinely more choice worthy (given my distinctive set of tastes), and my belief that it is preferable is therefore true.

Now consider how frequently a similar process is utilized on a single trip to the grocery store. This illustrates the power of the belief-formation process—a powerful process, recall, is one that produces a number of true beliefs without sacrificing reliability. Furthermore, the reason we are able to get through a grocery-shopping trip in a reasonable amount of time, often while multitasking, is that such a process is quick and efficient. Finally, we can spend more time taking care of other important tasks because mundane choices over products take up a minimal amount of time and cognitive resources.

Now consider an interpersonal context. Laverne would like her co-worker Shannon to join her and her close friend, Rolando, during Happy Hour. As a friendly gesture, Rolando invites his new co-worker, Ted. Shannon immediately notices that Ted looks as though he is feeling out of place, so she attempts to engage with him. Soon after, the evening is cut short when Rolando gets called away, at which point Ted makes his

<sup>6</sup> The same test can be run by imagining how things would be if we possessed no affective system whatsoever, or even a deficient one. Our imagination need not work hard, for there has been substantial empirical work done on this question. Those who have suffered injuries to the brain, which are crucial for a well-functioning affective system, not only suffer from severe deficits with respect to their moral reasoning, but also tend to make highly imprudent decisions as a result of these deficits (Damasio 1994).

exit too. Laverne had been busy catching up with Rolando, but now she's curious, so she inquires: "How was your conversation with Ted?" Initially cheerful and excited about the encounter, Shannon is now feeling rather dispirited. She responds: "Actually, I found it pretty awkward."

Let's stipulate for the purposes of illustration that the awkward encounter is the source of Shannon's low mood. In this case, Shannon forms a belief about the awkwardness of the encounter on the basis of her low mood, and she does so spontaneously and effortlessly. It could have gone differently. She may have arrived at the same belief in a plodding way. That is, she might have paused, and reflected on the following features of the encounter: Ted's responses were rather abrupt, his eyes wouldn't stop wandering, and I shouldered most of the conversational burden, etc. But going down this route would involve expending a number of cognitive resources, not to mention sacrificing the fluidity of her conversation with Laverne. A competent conversationalist is someone who moves naturally with the ebb and flow of an exchange. In this way, Shannon's response also manifested a high degree of fluency (see Railton 2009: 83).

The final example concerns a problem-solving context. Imagine that during a game of chess I reach for my rook in a decisive fashion. As I do so, I am thinking about my intended move but I am simultaneously overcome by a feeling of hesitation, which in turn causes me to rethink my strategy. The feeling of hesitation is plausibly interpreted in this context as signaling trouble. This, in turn, may have motivational effects insofar as it encourages me to deliberate further, and, as I will argue later, it may also alter the manner in which I process information. It might, for instance, lead me to narrow my focus of attention so that I am more attentive to potential vulnerabilities in my position.

In this section, I have argued that the belief-forming process associated with the affective system is indispensable to human intellectual flourishing. Without it, we would confront a range of unsolvable problems. On these grounds, mixed theorists should welcome the virtues of the affective system.

## 12.4 Revisiting the Situationist Challenge to Mixed Virtue Epistemology

My primary concern in this section is with the viability of mixed virtue epistemology, which combines into a single unified theory the intellectual virtues favored by both responsibilists and reliabilists. If the arguments above are on the right track, mixed theorists should also incorporate into their theory the intellectual virtues associated with the affective system. Doing so, I will argue here, has an added advantage: it equips the mixed theorist with a strategy for responding to one aspect of the situationist challenge. The challenge in question is aimed at virtue responsibilism, but because mixed virtue epistemology incorporates responsibilist virtues into its theory, it faces the same challenge.

The most worked-out version of the situationist challenge to date is presented in Mark Alfano's (2013) recent monograph. His central argument against virtue responsibilism is framed in terms of an inconsistent triad, which I reproduce here:

(*non-skepticism*) Most people know quite a bit.

(*classical responsibilism*) Knowledge is true belief acquired and retained through responsibilist intellectual virtue.

(*epistemic situationism*) Most people's conative intellectual traits are not virtues because they are highly sensitive to seemingly trivial and epistemically irrelevant situational influences (Alfano, 2013: 120).

Alfano seeks to resolve the inconsistent triad by arguing *against* classical responsibilism and *for* epistemic situationism. In particular, he argues that certain responsibilist intellectual virtues (e.g., creativity, flexibility, and curiosity) are empirically inadequate—that is, they cannot explain the data in psychology.

In defending the claim of empirical inadequacy, Alfano relies primarily on the research of Alice Isen and her colleagues to argue that the responsibilist intellectual virtues of creativity and flexibility cannot explain why people do well or poorly on a number of tasks. Instead, these traits only explain a person's behavior when the person happens to be in a good mood, but moods are elevated by "seemingly trivial and epistemically irrelevant" situational influences (Alfano 2013: 120, 122). Thus, "local" traits, such as *creativity-while-in-a-good-mood* do the necessary explanatory work according to Alfano, but fail to pack a sufficiently forceful normative punch to count as intellectual virtues of the kind responsibilists (and, therefore, mixed theorists) require for their theories to work (Alfano 2013: 120).

#### 12.4.1 Creativity

I begin by describing some of the tasks and associated data Alfano invokes in defense of his argument. One familiar task researchers use in order to gauge creativity is the "Duncker Candle Task." In this task, participants are provided with a box of tacks, a candle, and a book of matches. They are then asked to affix the items to a vertical cork board in such a way that the candle can be lit without dripping any wax onto the surface below. Participants in the experiment typically try several different strategies, but it turns out that only one strategy works: empty the tacks out of the box, pin the box to the cork board with one of the tacks, and use the box as a platform for the candle. In the control condition, the majority of participants are unable to complete the task in the given time frame. Plausibly the explanation is that they were unable to see the box of tacks as serving any purpose other than holding the tacks. This is further supported by Adamson's (1952) study, in which participants are given the items with the tacks outside the box. Here, they were much more likely to successfully complete the task, presumably because the box was not functioning as a storage container for the tacks.

The candle task has a solution, and in order to arrive at the solution participants typically must generate several novel ideas. Psychologists call this process "ideation,"

and much of creativity research is, for better or worse, preoccupied with this phenomenon. Ideation is typically subdivided into three further categories: fluency, originality, and flexibility (Runco & Chand 1995: 255). In this context, *fluency* refers simply to the person's ability to produce a substantial number of ideas. Generating a solution to the candle task is not easy, so participants might find themselves trying several different strategies. *Originality* is a function of how atypical or unique the idea is. The solution to the candle task itself turns out to meet this criterion (hence the phrase "thinking outside the box," which was apparently inspired by the candle task). Runco (2005: 617) suggests that originality is a necessary condition for creativity. If someone replicates a painting or produces an exactly similar product without making any novel improvements, arguably this disqualifies it from being a creative achievement. Originality is not sufficient for creativity, however, because some original ideas are too bizarre or are simply irrelevant to the task at hand to count as a creative achievement (Runco 2005: 617). Finally, a person is said to exhibit *flexibility* when she generates new strategies or ideas in order to adapt to task demands. For instance, a participant in the candle task might first attempt to pin the candle to the board with the tacks and when this fails she might melt the wax and try to seal the candle to the cork board. By contrast, someone who attempts to affix the candle to the board using only various configurations of tacks is not exhibiting flexibility.

Another frequently used test for measuring creativity is the "Remote Associates Task" (RAT), developed by Sarnoff Mednick (1962). It involves an extended series of questions each containing three words which seem, on the face of it, to be unassociated. The task for the participant is to generate a fourth word that *is* associated with all three. Sample triads include: (1) Broken/Clear/Eye. (2) Cracker/Union/Rabbit. (3) Salt/Deep/Foam. And so forth.<sup>7</sup> Success on the task requires ideation, e.g., participants usually must generate several diverse associations before they happen upon the right one (if they do). The point I want to underscore here, as it will become relevant again later, is that the RAT and the Duncker candle task are both used to gauge a certain kind of creative thinking by eliciting exercises of the abilities and processes characteristic of ideation.

#### 12.4.2 Creativity and mood effects

Isen et al. (1987) were concerned with what effects, if any, an elevated mood would have on participants' success (or lack thereof) in the candle task. Interestingly, they found that an elevated mood was positively correlated with improved performance. Participants were given ten minutes to complete the task. In the first (elevated mood) condition, they watched a five-minute movie clip containing blooper-style outtakes from two 1960s' television westerns. In this condition, nine out of twelve participants (seventy-five percent) solved the candle task. In the second (neutral) condition, participants were shown a five-minute segment from a film on math. Here, only three out of

<sup>7</sup> Answers: (1) Glass; (2) Jack; (3) Sea.

fifteen participants (twenty percent) solved the task. In the third condition, no mood induction techniques were used. Instead, the tacks were displayed outside the box alongside the candle and book of matches, as it had been in Adamson's (1952) study. Participants performed the best in this condition, with nineteen out of twenty-three (eighty-three percent) completing the task, thereby replicating Adamson's earlier results. In the fourth (control) condition, no mood induction was in place, the tacks appeared in the box, and only two out of fifteen participants (thirteen percent) solved the candle task.<sup>8</sup>

Isen and colleagues observed similar mood effects in the RAT. Those shown the blooper reel performed better than those in the control condition. The mean number of correct answers for those with an elevated mood was 5.00, while it was 3.04 for the control condition with no mood induction (1987: 1128).

What then can we conclude about creativity from the Isen et al. study? Presumably, the participants exhibited some degree of fluency and flexibility in all of the conditions, which is to say that, in trying to solve the problem before them, they were able to generate a number of sufficiently varied ideas. Nevertheless, having an elevated mood made a non-trivial difference on both tasks. Furthermore, the stimulus that elevated their mood (i.e., the blooper reel) was undoubtedly irrelevant to the task at hand. Alfano takes this to suggest that creativity alone cannot explain the results, only a trait like *creativity-while-in-a-good mood* can. But this narrow trait is not what virtue responsibilists (or mixed theorists) had in mind, and it is not clear that it is the type of trait agents should get credit for—contrary to a central tenet of virtue responsibilism (Code 1987).

The argument articulated above has a hidden premise. It assumes that people's moods are regularly swayed by "trivial and epistemically irrelevant influences" in *naturalistic* contexts. Notice, however, that situationists cannot appeal to the *experimental* data (where mood-manipulation techniques are used) as direct support for there being a frequent confluence of incidental mood and opportunities for creativity in naturalistic contexts. We would first need independent evidence that actual life conspires in such a way that we are, more often than not, bound to rely on incidental moods when engaged in creative tasks. I offered reasons in section 12.3.2 for thinking that such evidence isn't likely to be forthcoming. Thus, instead of taking a leap of faith, I suggest we focus on the aspect of the situationist's argument where we can make some headway empirically.

In my view, the dispute between epistemic situationists and virtue responsibilists gets traction over the question: Why do people perform better on the RAT and candle task when their moods are elevated? Alfano is not completely silent on this question (2013: 124), but he doesn't mention that psychologists are divided on the matter and, in fact, offer a range of competing explanations. Alfano prefers the explanation offered by Isen and her colleagues, and for what it's worth this appears to be one of the dominant

<sup>8</sup> Each result provided in this paragraph comes from Isen et al. 1987: 1123.

views in psychology. Importantly, however, this is not because it does a better job accounting for the data, as Schwarz & Clore point out (2007: 395). In the interest of space, I will not attempt the mammoth task of comparing and contrasting the merits of the various models (see Aspinwall 1998; Isbell & Lair 2013). My aim is rather to bring balance to the debate between epistemic situationists and virtue epistemologists: If there is a plausible explanation of the data in the psychological literature that is more favorable to mixed theories, it should be aired before any definitive conclusions can be drawn about empirical adequacy.

### 12.4.3 Explaining the data

According to the explanation situationists prefer, most people possess the trait of being *creative-while-in-a-good-mood* and that is why they perform better on the creative task even though their elevated mood has nothing whatsoever to do with the task itself. This way of accounting for the data relies on the assumption that elevated moods *uniformly* lead to better performances on creative tasks. But there is some reason to doubt this.

Martin & Stoner (1996) report a study that considers what would happen if participants were allowed to think about their initial response on a creative task. The study begins with a standard word-association task. Predictably, when given only three seconds to respond, participants offer the first association that comes to mind, and these tend to be the most obvious ones (e.g., associating the word “dog” with the cue word “cat”). Yet, when participants in the elevated-mood condition were instructed to consider whether they could come up with a more creative response, they tended to think they could, whereas those in the low-mood condition tended to think they couldn’t. The explanation being that the group in the elevated-mood condition had a false sense of confidence in their ability to generate a more creative response, while those in the low-mood group had a false *lack* of confidence. Notice, however, that people tend to generate less creative responses when they offer the first idea that comes to mind—this is a standard finding in the literature on creativity (Amabile 1972). Thus, by simply giving it another shot, those with an elevated mood were more likely to come up with creative responses, whereas those in the low-mood condition did not even try, and so did not.

Matters become even more interesting in the second study when participants are instructed to ask themselves: “Is my initial response a creative one?” Those in the elevated-mood condition again had a false sense of confidence. They thought their initial response was creative, but this meant they were less inclined to try to develop a more creative response. By contrast, those in the low-mood condition thought their initial response lacked creativity because of their false lack of confidence, and so were more inclined to go on to develop more creative responses. Again, moving beyond the initial response almost always leads to more creative responses, so those in the low-mood condition performed better on the task.

The upshot of the two studies is that depending on whether subjects were allowed to think about their responses, and depending on how they interpreted their mood, no

particular mood uniformly produced more creative responses on the task. Thus, there is some reason to be weary of the situationist appeal to *creativity-while-in-a-good-mood* when offering an explanation of the data on creativity.

Of course, mixed theorists (as proponents of the affect-as-information approach) must also be able to adequately explain the data; so the first order of business is to try to make sense of the positive correlation between elevated mood and improved performance in the Duncker candle task and the RAT.

The Isen and colleagues study utilizes standard mood-induction techniques. Thus, we know in advance that participants' moods are elevated not because of anything to do with the creative task itself, but because they just watched a funny video. In such contexts, the person's mood is, quite simply, a source of *misinformation*. This raises the question of whether a proponent of the affect-as-information approach can explain the striking correlation between elevated moods and success on ideation tasks. I argue below that it can explain this correlation.

According to the affect-as-information approach, when someone mistakenly attributes her mood to the wrong target the belief she forms on the basis of this misinformation will either be false or accidentally true. And yet, for better or worse, even false beliefs can influence our behavior and decision-making. This is because the belief itself may influence our motivation or it could alter the way we process information. I discuss each possibility in turn.

As Clore & Huntsinger note, in a typical task situation the source of one's mood is either "finding oneself making progress" or "encountering difficulty" on the task (2007: 396). When agents attribute their mood to the proper source in such a context an elevated mood informs them that they are indeed making progress. It is natural to then suppose that the belief formed on the basis of this information will influence their motivation. In particular, it might spur the person on toward generating even more ideas. Notice, too, the more ideas one produces, the more likely one will be to generate the idea that allows one to successfully complete or do well on an ideation task.

As hinted at above, the motivational effects are not likely to be any different in the misattribution case. A person may have false confidence that she is making progress on some task, but the effects on her motivation will be the same because the person is unaware that her confidence is groundless. In this case, as in the former one, her (false) confidence in her progress will spur her on toward generating more ideas and this, in turn, raises the likelihood that she will do well on an ideation task. This is only part of the explanation, however, for while these motivational effects plausibly promote fluent and flexible creative thinking (i.e., the generation of many diverse ideas), it is unclear that these effects empower original thinking.

In order to explain why participants in the elevated-mood condition were more likely to generate novel solutions in the Dunker candle and the RAT tasks, it is necessary to introduce a distinction psychologists draw between "global" and "local" information-processing styles. A *global* style is characterized by "category-level, top-down,

schema-driven, relational” processing, whereas a *local* style involves “bottom-up, data-driven, item-specific” processing (Hunsinger et al. 2012: 222). To use a familiar illustration, agents engaged in global processing focus on the forest, while local processing leads agents to focus on the trees (Hunsinger et al. 2012: 221).

How are these different processing styles relevant to explaining the results of the Isen and colleagues study? Consistent with the affect-as-information approach, the “malleable mood effects” hypothesis says that affective responses confer value on the accessible or dominant mode of thinking in a given context (Hunsinger et al. 2012: 228). An elevated mood *encourages* whatever happens to be the dominant mode of thinking, whereas a low mood will *discourage* it. Importantly, certain modes of thinking naturally take precedence when agents are engaged in certain kinds of tasks (Hunsinger et al. 2012: 222). In particular, global processing is often the most accessible processing style for a range of tasks. As it happens, moreover, global processing style leads to better performances on ideation tasks, such as the Duncker candle and the RAT (Isen et al. 1984: 1212). Thus, the malleable mood effects hypothesis predicts, consistently with the results, that participants will perform better on ideation tasks when their moods are elevated regardless of the source of the mood elevation.<sup>9</sup>

Why might global processing lead to better performances on the Duncker candle task and the RAT? Recall that in the RAT, the participant begins with a string of seemingly unassociated words. If participants focus too much on each word in the list, they may fail to recognize the relations between them. Global processing has the opposite effect. Thus, one will be more likely to locate the correct answer when utilizing this style. Similarly, for the Duncker candle task, you can imagine someone engaged in global processing going through the following associations: tacks are for affixing one thing to another thing, wax is for melting and for sealing one thing to another thing, box-shaped things are for platforms (think here of a “soapbox” used as a makeshift platform for sidewalk speeches). The agent engaged in global processing begins with the obvious associations, and then gradually moves to more remote ones, and by doing so she eventually arrives at the solution to the task. The affect-as-information approach predicts that an elevated mood will encourage participants to stick with a global processing style. Their mood informs them that this way of processing information is working. The belief formed on the basis of this information is accidentally true, but nonetheless empowers original thinking.

<sup>9</sup> This is a welcome result, but it is worth noting here the role global processing plays in cases of implicit prejudice. One thought might be that if elevated moods tend, in certain contexts, to promote a global-processing style, and global-processing style encourages implicit prejudice (as we have reason to believe it does), then the worry is that the affective system sometimes works in tandem with the vice of “epistemic injustice” to use Miranda Fricker’s (2007) apt phrase. Unfortunately, I haven’t the space to give this concern the attention it deserves; so I will instead gesture at a reason for thinking that the problem is less worrisome than it may seem. Here it is important to remember that, according to the malleable mood effects hypothesis, elevated moods might be associated with the activation of implicit prejudice as well as *blocking* activation of implicit prejudice. And the same goes for low moods. Thus, there is no strict relationship between being in a particular affective state and engaging in implicit prejudice.

The explanation offered above contains several assumptions, but all of them (including the malleable mood effects hypothesis) are well supported empirically. For this reason, the proponent of the affect-as-information approach is well equipped to explain the correlation between elevated moods and improved performance on ideation tasks. The explanation is that elevated moods have certain effects on motivation and processing style whether or not the agent is mistaken about the source of her mood. These effects sharply increase the likelihood that someone will do well on ideation tasks of the sort found in the Isen and colleagues study.

One explanatory burden still remains, however. Why is it that participants failed to do well in the control condition? After all, if global processing is the dominant style in ideation tasks, and that style leads to improved performance on those very same tasks, then why were participants unable to employ the informational value of their own *naturally* occurring moods during the course of the experiment and do better than they did in this condition? The answer, I think, lies in the role time pressure is likely to have played in altering participants' moods—a factor Isen and colleagues failed to take into account.<sup>10</sup> Amabile (1996) found that time pressure impedes creativity. One natural explanation of this data is that the expectation to generate solutions in a relatively short period of time caused participants to feel slightly anxious. Anxiety, however, is a mood depressor (as opposed to a mood elevator). It tends to lead to local processing, and a narrowing of the person's attention, which, as we just saw, impedes success on ideation tasks (MacLeod & Matthews 1988). This would explain why participants were unable to perform well in this condition—namely, the proper controls were not in place.

Before concluding this section, I want to make one further observation. The psychological data that situationists appeal to focuses exclusively on ideation tasks. Yet, it has not been established that ideation is the only important dimension of creativity. Davis (2009: 35), for instance, encourages future researchers to use more sophisticated tasks, such as Gorborz & Necka's (2003) *Generation and Evaluation* (GenEva) procedure. This involves an ideational component—specifically an attempt to solve a real-world problem—and an evaluative component, in which subjects then consider whether their solution was a good one. Davis's suggestion, I take it, is motivated by the thought that being genuinely creative is not simply a matter of generating a bunch of novel ideas. If we want to generate an effective solution to a real problem, we often need to adequately judge the shortcomings of our previous ideas and recognize when our idea is a good one. This suggests, along with the arguments above, that the situationist conclusion about the empirical inadequacy of robust traits such as creativity and flexibility is, in an important respect, premature.

## 12.5 Conclusions

I began the chapter by arguing that the affective system's belief-forming process is intellectually virtuous. I did so by defending the claim that its associated capacities

<sup>10</sup> Participants were explicitly told they had only ten minutes to complete the task (Isen et al. 1987: 1123).

and processes possess certain features that promote an agent's intellectual flourishing. These features are the process desiderata: reliability, power, significance, speed, efficiency, and fluency.

I then turned to the situationist challenge. Here I argued that, as matters stand, there is no rational (or empirical) basis for epistemic situationism. Situationists have yet to provide us with evidence in support of the claim that incidental mood effects are widespread in naturalistic contexts. I also noted that the situationists' explanation of the experimental results in terms of the narrow trait of *creativity-while-in-a-good-mood* is problematic. The data suggest that, depending on the context, low moods can also improve the participants' performance on creative tasks. The upshot of these arguments is that, as things stand, epistemic situationism is not a viable alternative. Thus, virtue responsibilists and mixed theorists can consistently hold their respective positions while also maintaining non-skepticism. In other words, Alfano's "inconsistent triad" is resolved barring further argumentation.

Of course, mixed theorists should not be content with this victory. It is not enough that proponents of the theory hold a consistent position. The theory should also be empirically adequate. With this in mind, I turned to a defense of the claim that mixed theorists, as proponents of the affect-as-information approach, can explain the existing data on creativity (understood here as ideation). The theory predicts that, even in misattribution contexts, when agents form a belief on the basis of their elevated mood the belief may have certain motivational and processing effects. On ideation tasks, these effects happen to work in their favor.

Mixed theorists are thus well equipped to explain the experimental results. Ideally, however, a theory of intellectual virtues will also be able to make sense of creativity as it manifests in naturalistic contexts. Here, too, mixed theorists have a compelling proposal to offer. The agent's robust trait of creativity operates together with the processes and capacities grounded in the affective system to empower agents to solve real-world problems. They do so by enabling agents to generate and then evaluate the strength of their ideas. This explains the remarkable ingenuity and technological accomplishments of humans over time, but also the everyday creative problem-solving each of us engages in when we work, play games, or make dinner.

The conclusion of the chapter is that mixed theorists turn out, somewhat unexpectedly, to have an empirically viable research program (perhaps even more so than that of epistemic situationists). Furthermore, mood effects need no longer be seen as the bane of mixed virtue epistemology, but can instead be fully incorporated into the theory.

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