

Perceived Questionability and the Phenomenology of Critical Disposition

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Over the past quarter century, critical thinking (CT) theory has centered on the distinction between critical thinking aptitude and disposition. The 1990 Delphi Report presented a consensus opinion of forty-six experts that firmly established this distinction, offering detailed descriptions of the skills defining the critical thinking process, as well as an exhaustive list of the attitudes and values characterizing the ideal critical thinker.¹ Implicit in this distinction was the acknowledgment that skill and disposition can exist independently of each other — that there could, and likely do, exist skilled critical thinkers who lack the personal motivation to utilize those skills, as well as those who habitually attempt to engage critically without generating much cognitive power. As noted by the report's author, many on the Delphi panel even worried that “a person might be skilled at CT but not fair-minded, and perhaps even unethical, in the use of those skills.”² Thus, the panel's consensus statement emphasized the need for pedagogy to attend not only to the development of CT aptitude, but to nurture what Harvey Siegel has termed the “critical spirit.”³

Most of the work on critical thinking disposition has focused on two areas: elaboration of the critical spirit and assessment methods.⁴ Oddly enough, little has been proposed regarding pedagogical techniques that might improve critical disposition. Indeed, in stating that “the experts harbor no illusions about the ease of designing appropriate instructional programs or assessment tools [to nurture critical disposition]” (*DR*, 11), the Delphi panel explicitly acknowledged the difficulty of developing such techniques. The panel limited its own pedagogical recommendations to “modeling how to evaluate critically that information which students would normally accept uncritically and encouraging them to do the same” (*DR*, 14). Peter Facione has further urged that we expand student opportunities to engage critical thinking in the academic disciplines (*DCT*). While these proposals seem reasonable in their own right, they, as a whole, comprise a rather anemic pedagogical toolbox. And this is not surprising given that one might wonder whether it is possible to “teach” disposition in the first place.

That said, I would like to propose some additional pedagogical tools. I believe that, to the degree that critical thinking theorists have defined critical disposition solely in terms of attitudes, or “affective dispositions” (*DR*, 13), they have missed an essential component of the critical disposition, one that suggests pedagogical recommendations that extend beyond those offered to date. Specifically, I propose that if we define the ideal critical thinker in terms of the tendency to engage in critical thinking, the critical disposition is, in no small part, determined by what I call “perceived questionability”: the quality of experience that presents the degree to which assertions, arguments, and experiences appear questionable. Moreover, I will argue that Hubert Dreyfus's five-stage model of skill building implies that individuals

emotionally committed to activities that enhance critical thinking skills will improve how they perceive questionability — that is, they will be better able to see the world as questionable when, and only when, it should be seen as such. Taken as a whole, the argument suggests that emotionally involved skill building improves critical disposition.

DEFINING CRITICAL DISPOSITION

Like philosophy in general, critical disposition literature has struggled with the concept of disposition. In claiming that the ideal critical thinker is “habitually disposed to engage in, and to encourage others to engage in, critical judgment” (*DR*, 12), the Delphi panel presented a notion of disposition tied directly to behavior — that is, individuals disposed to think critically are those that tend to engage in critical thinking. As simple as it sounds, such a “backward-looking” definition makes it difficult to offer practical pedagogical recommendations. It provides no explanation of the factors contributing to the disposition, instead treating it as a mysterious, unknowable property, one akin to, say, the brittleness of glass.⁵ In contrast to this conception, consider the following passage from the Delphi Report:

Finding: ... there is a critical spirit, a probing inquisitiveness, a keenness of mind, a zealous dedication to reason, and a hunger or eagerness for reliable information which good critical thinkers possess but weak critical thinkers do not seem to have.

Recommendation: Modeling that critical spirit, awakening and nurturing those attitudes in students, exciting those inclinations ... are, for the majority of panelists, important instructional goals and legitimate targets for educational assessment. (*DR*, 11)

This passage presents a somewhat different conception of disposition, one tied, not directly to behavior, but rather to what one might call intellectual virtue.⁶ Here, the critical spirit is defined primarily by reference to attitude and motivation — inquisitiveness, zealous dedication, hunger, and eagerness — and the recommended pedagogy involves nurturing attitudes, exciting inclinations. Indeed, the Delphi Report enumerates nineteen such affective dispositions, almost all of which concern mental motivation. So while the panelists may have initially conceived of critical disposition as the tendency to think critically, they ended up substituting a set of personal attitudes expected to produce that behavior.

The same approach has been utilized by those involved in CT disposition assessment. In explaining the genesis of the California Critical Thinking Disposition Inventory, Facione characterizes CT disposition as a “nexus of attitudes, intentions, values, and beliefs” (*DCT*, 63) that provide a “consistent internal motivation to use CT skills to decide what to believe and what to do” (*DCT*, 73). Carol Giancarlo, Stephen Blohm, and Tim Urdan are equally clear when presenting the CM3, a CT disposition assessment tool targeting secondary school students: “these attitudes, values, and inclinations are dimensions of one’s personality that relate to how likely a person is to approach problem identification and problem solving by using reasoning.”⁷ In neither case is critical disposition linked directly to behavior. Rather, for assessment purposes it is defined in terms of self-professed attitudes.

Two points are in order. First, it is important to acknowledge the gap that exists between mental motivation and the tendency to exhibit critical thinking behavior.

For one can be sufficiently motivated to think critically and not simply to judge that an assertion or situation requires critical engagement. You might object that an individual truly disposed to think critically should be motivated to examine even those assertions and situations that appear unassailable. However, not even the ideal critical thinker examines *every* assertion, argument, or experience, nor would we want them to. Indeed, those few who are habitually over-disposed to critical analysis are rarely called critical thinkers. More likely, they find themselves labeled with some debilitating diagnosis. The point is that our description of the ideal critical thinker involves a normative claim — the claim that the ideal critical thinker is disposed to think critically *when critical thinking is warranted*. Yet mental motivation alone cannot determine the appropriate time to engage the critical thinking process. For that to happen, a certain pre-reflective judgment of situation is required. And it is this judgment of situation that bridges the gap between maintaining sufficient mental motivation and the tendency to exhibit critical thinking behavior. Put differently, a conception of critical disposition based solely on attitudinal tendencies cannot account for the requirement that the critical spirit manifest as a tendency to actually engage in critical thinking.

Second, when we talk about improving the critical disposition, the normative claim is nowhere to be found. Rather than speak of the ideal as “warranted critical thinking,” we tend simply to encourage *more* critical thinking. No doubt, there is often good reason to assume this attitude. Yet I would suggest that the mental-motivation conception would seem less appealing if we acknowledged that we are not asking for more critical thinking, but rather for people to engage critically when, and only when, critical thinking is warranted. Indeed, this latter claim should provide the basis for what it means to improve critical disposition.

PERCEIVED QUESTIONABILITY

Both Facione and the Delphi panelists hint at the problem of defining critical disposition as mental motivation. In addition to using the phrases “probing inquisitiveness,” “zealous dedication,” and “hunger or eagerness,” the Delphi panelists mention a “keenness of mind.” Similarly, one of the nineteen affective dispositions describes an “alertness to opportunities to use CT” (*DR*, 13). While inquisitiveness, dedication, hunger, and eagerness all seem to qualify as attitudinal characteristics, it is difficult to see how keenness of mind and alertness to opportunities can be seen as such. Instead these seem more like an aptitude, or some sort of experiential sensitivity.⁸ Facione, too, hints at the insufficiency of mental motivation. In discussing what it means to have consistent internal motivation to use CT skills, he uses typically motivational phrases: “Some approach problems confident in their own ability to reason ... Some people are open-minded ... Some approach problems in diligent, focused and systematic ways ... Some seek evidence ... Some seek answers as objectively as possible ... Some people are curious” (*DCT*, 73).

However, in the same passage he proposes a clearly non-motivational aspect to CT disposition: “Some see the complexity and subtlety of problems, noting multiple possible resolutions; others see things in stark, dualistic terms, as good or bad, right or wrong, true or false” (*DCT*, 73). Like keenness of mind and alertness to

opportunities, seeing complexity has little to do with one's attitude toward critical thinking. Rather, it describes an aptitude or sensitivity that determines the degree to which the world is viewed as questionable.

Thus, in defining critical spirit as mental motivation, it seems clear that theorists have ignored an important component of the critical disposition. While I previously used the phrase "pre-reflective judgment of situation" to describe what is missing, the phrases "keenness of mind," "alertness to opportunity," and "seeing the complexity" all imply an act of perception rather than an act of judgment, an aptitude for holistically discriminating questionability in experience. To capture this perceptual quality, we might say that the ideal critical spirit has the ability to appropriately perceive questionability, to "see" the degree to which an assertion, argument, or experience is appropriately questionable. It is important to emphasize that this perceived questionability precedes the critical thinking process. It is not something that occurs as a matter of reflection after one has decided to engage critically with an assertion. Rather, it is something that is given, a salient quality of experience that provides the impetus to either engage critically or accept/reject at face value. This is not to say that only ideal critical thinkers perceive questionability. Indeed, I am arguing that perceived questionability is an inherent quality of experience. Instead, it seems that difference among individuals is a matter of alignment with the ideal. That is, good critical thinkers perceive things as questionable when, and only when, they should be perceived as questionable.⁹ And this ideal, again, provides the basis for what it means to improve.

The degree to which we perceive questionability impacts how likely we are to engage in critical judgment. Regardless of mental motivation, if I experience an assertion as absolutely true or absolutely false, I will be less likely to critically confront that assertion than if I perceive it as highly, or even somewhat, questionable. In the language of Gibsonian affordance theory, perceived questionability affords the opportunity for critical examination; it defines the possibility for critical engagement.¹⁰ Certainly, being afforded such opportunity does not guarantee actual engagement. As the Delphi participants and others argue, mental motivation is still necessary. However, in the absence of the affordance, mental motivation would need to be invoked twice over: first for the conscious, intentional effort required to evaluate whether the assertion is questionable in the first place, and again to engage critically with the assertion deemed questionable. All else being equal, this additional requirement makes it that much less likely that one would actually engage in critical judgment. In short, individuals would be less disposed to think critically in situations warranting critical thought.

CT SKILL BUILDING AND PERCEIVED QUESTIONABILITY

As a holistically discriminated property of given experience, perceived questionability bears significant didactic relevance to improving the critical disposition of students. Rather than focus solely on increasing mental motivation, perceived questionability offers an alternative means of awakening the critical spirit. For if we can improve the degree to which individuals see the complexity of

assertions, if we can help them to perceive assertions as questionable when they should be seen as such, we can improve their CT disposition. The obvious question, though, is whether we can implement a pedagogy capable of such experiential transformation. I would like to propose that the first four stages of Hubert Dreyfus's five-stage model of skill building provide the foundation for just such a pedagogy.

Dreyfus's model describes both the essential characteristics of each stage of skill development, as well as the necessary and sufficient conditions to move from one stage to the next, from novice to expert.¹¹ In the novice stage, an individual lacking experience with a particular skill is instructed to act according to a set of "context-free" rules. Dreyfus offers two examples, the novice car driver and the novice chess player. In both cases, the neophyte is given a set of rules for action requiring only trivial judgment of situation: the driver, for example, is told to shift from first to second gear when the speedometer reads twenty miles per hour, while the chess player is given a set of point values for each piece on the board, and told to take the opponent's piece whenever that action will result in a point loss for the opponent. As the individual gains experience, she begins to notice aspects of the activity that dictate additional rules, rules that involve categorization of situational circumstances. For the driver, this might mean shifting gears based on the sound of the engine. Similarly, the chess player might learn to avoid overextending her position by refraining from trades that result in unprotected pieces. Such rule development is the hallmark of what Dreyfus terms the advanced beginner stage.

As the number of contextual rules multiplies, the individual must decide which aspects of a situation to prioritize — that is, what perspective to adopt. This begins the stage of competence. The competent chess player must decide whether to pay more attention to the perceived weakness of an opponent's king defense or his own vulnerability. Similarly, the driver might have to prioritize attending to aspects of the route that enable him to arrive on time over those that ensure his safety. In either case, perspective enables the actor to limit the number of rules that dictate action. The chess player might focus solely on offensive action, while the driver might choose to travel as fast as possible at the expense of not passing on the right.

According to Dreyfus, competence defines a turning point in skill-building development, as action now requires a judgment of situation. The relative inexperience of the competent actor forces him to make conscious, perhaps calculated, decisions among perceived options. As Dreyfus notes, individuals learn to "choose a perspective that then determines which elements of the situation are to be treated as important and which ones can be ignored. As they restrict themselves to only a few of the vast number of possibly relevant features and aspects, decision-making becomes easier."¹²

And yet, there exist no rules for determining which perspective to adopt, which situational aspects should be prioritized. Instead, the actor makes decisions by trial and error. He may wing it, engage in a calculative procedure, or trust the advice of others. However, without previous experience, perspective is always the outcome of a conscious choice among perceived alternatives.

It is important to understand that Dreyfus's use of the term competence differs from our common understanding. Competence is defined by conscious perspective adoption, not by successful action. The competent actor may fail in attaining her goal but is competent by virtue of having chosen a perspective. Hence, we would expect the performer to fail often throughout the competence stage, as potentially errant plans are chosen for newly encountered situations. These failures, however, play a crucial role in skill development, as they provide feedback to the actor that develops a sense of responsibility: "prior to this stage, if the learned rules didn't work out, the performer could rationalize that he hadn't been given adequate rules.... Now the learner feels responsible for disasters.... Successful plans induce euphoria, while mistakes are felt in the pit of the stomach."¹³ While Dreyfus's depiction of the emotional ramifications seems somewhat extreme, his point seems ultimately reasonable. Individuals acting solely according to rules have little reason to become emotionally involved in their actions, while those offered the opportunity to make meaningful decisions are likely to feel good about their successes and bad about their failures.

This emotional commitment is crucial to attaining proficiency, the next stage in the model. Dreyfus claims that the competent actor attains proficiency only when perspective adoption results from intuitive behavior instead of reasoned response, when "certain features of the situation will stand out as salient and others will recede into the background and be ignored."¹⁴ Thus, what was to the competent actor a conscious choice among alternatives becomes a holistically discriminated property of perception to the proficient performer. Put simply, the proficient performer perceives the appropriate perspective; it becomes a given of his experience. And emotionally committed skill engagement is essential to making this switch:

If, as the learner practices her skill, events are experienced with involvement, the resulting positive and negative experiences will strengthen successful responses and inhibit unsuccessful ones. The performer's theory of the skill, as represented by rules and principles, will thus gradually be replaced by situational discriminations accompanied by associated responses.¹⁵

We can now appreciate how competence signals the turning point in skill development. In forcing the user to prioritize recognized aspects of experience, competence allows emotion to enter the learning process. Emotion provides the standard by which successful perspective adoption is judged — successful action is action that leads to feeling good, while failed action results in bad feelings. Future situations that are pre-reflectively judged to be similar to past situations evoke past perspective adoption responses that were judged to be successful — that is, accompanied by the "euphoria" of success. In this way, perspective adoption occurs without any use of a conscious, calculative procedure.¹⁶

At this point, we can utilize Dreyfus's model to link CT skill building to perceived questionability. The novice critical thinker is given a set of context-free rules such as "accept a statement as true if and only if you find more reasons that it is true than false." As the thinker begins to notice aspects of dialog, text, and experience related to thinking critically, she begins to develop — or may be

instructed to use — context-sensitive rules such as “question statements not made by experts.” At the point of competence, the thinker will be forced to prioritize among the numerous factors contributing to critical engagement of an assertion — the trustworthiness and authority of the source, recent and not-so-recent experience, and how the assertion comports with other beliefs, for instance. As our thinker owns the results of decisions to either critically engage assertions or accept or reject them outright, feelings of satisfaction and dismay replace reason as the standard for determining questionability. Future contextualized assertions that are experienced as similar to assertions whose judgment of questionability previously led to feelings of success tend to evoke similar “decisions” of questionability. But, again, these are not decisions requiring judgment between consciously represented alternatives. Rather, they are learned responses that manifest phenomenologically as a holistically discriminated quality of experience. That is, they appear as perceived questionability.

To say that emotionally committed skill building is responsible for the genesis of perceived questionability, though, is not the end of the story. For I am claiming that CT skill building *improves* perceived questionability, even for those who have not formally engaged in the process. If we all experience perceived questionability, what benefit does a formal process offer? To answer this question, we should recognize that we have all engaged in some degree of CT skill building throughout life. Put simply, we are all proficient critical thinkers, in Dreyfus’s technical sense of being able to intuit situational perspective. Yet, this does not mean that we intuit as well as we could or should. To the degree that we do not match the ideal, we tend to see relative certainty when things are questionable and perceive things as questionable when we shouldn’t. All this seems to make sense when we realize that people need only so much critical thinking skill to “get by.” Since “getting by” can itself act as the criterion for feelings of successful perspective adoption, it is reasonable to think that everyone experiences perceived questionability, even those who might not approximate our ideally disposed critical thinker. Indeed, such mediocre achievement seems likely when proficiency relies on a self-judged, emotionally based measure of success or failure. That said, the drive to improve critical disposition is motivated by the desire to help people do more than “get by.” Thus, improving perceived questionability — getting the individual to align better with the ideal of perceived questionability — becomes a worthy goal.

The Dreyfus model supports this notion of improvement by postulating a twofold relation between situational discrimination and successful perspective adoption. Finer situational discrimination not only improves our ability to perceive appropriate perspective, it also works to redefine what counts as intuitively appropriate.¹⁷ So for example, as we become adept at seeing the more subtle aspects of experience, “getting by” becomes a less sufficient measure of life success. While we may already experience perceived questionability, formal engagement with critical thinking enables progressively finer situational discrimination, which itself results in more appropriate perspective adoption. In other words, emotionally committed critical engagement naturally brings us closer to the ideal of perceived questionability.

PEDAGOGICAL RAMIFICATIONS

The argument I have offered to this point can be framed syllogistically:

- Development of critical thinking proficiency improves perceived questionability.
- Improved perceived questionability results in improved critical disposition.
- Therefore, development of critical thinking proficiency improves critical disposition.

If we accept this argument in the context of wanting to improve critical disposition, the pedagogical question becomes, how can we develop proficient critical thinkers? In their attempt to improve the critical disposition, Delphi panelists focused on the role of adult modeling, while Facione suggested that we expand the number and diversity of opportunities to engage in critical thinking. If we accept my analysis of Dreyfus's model, though, modeling and practice themselves are insufficient, as development of proficiency demands emotional commitment. Thus, students must care about their perspective adoption decisions. They must feel good about the successes resulting from such decisions and bad about the failures. Absent such feelings, no amount of practice will improve perceived questionability.

At the very least, this conclusion provides theoretical support for emerging data that documents the relative ineffectiveness of standalone, textbook-based critical thinking courses.¹⁸ But it also encourages us to think of opportunities for critical engagement that solicit this emotional buy-in. While I doubt any one pedagogical approach will engender universal commitment, people tend to care about their decisions when they engage with content or activities that are personally meaningful. This suggests that we should engage students critically on issues of personal relevance. Perhaps this means critical discussions about current events, deep space, or classical literature. Or we might have to enlarge the domain of legitimate topics to include sports, pop culture, monsters, and computer games. If, as teachers, we hold dear the ability to nurture critical disposition, we may have to embrace discussions on any number of unexpected topics.

Alternatively, we might make the activity itself meaningful. Despite the potential pitfalls of academic competition, competitive CT activities such as debates, model UN, and philosophy Olympiads provide the type of incentive necessary to engender emotional commitment. Teachers might find ways to create in-class competitive activities as well, offering students games that foster critical skill building. No doubt, chess is one such game. Indeed, James Paul Gee convincingly argues that even video games offer an arena for extended critical engagement.¹⁹

That emotional commitment is necessary for learning is a point that has been made many times before. Dreyfus, however, has provided a model of skill building that defines a precise role for such commitment — it is the impetus for the switch from reasoned decision making to skilled intuitive judgment. In appropriating Dreyfus's model to analyze development of critical thinking expertise, I have

proposed that emotionally committed skill building has the salubrious effect of improving not only critical thinking skills, but the disposition to engage the world critically. Such improvement does not simply mean more critical engagement. Rather, it means better judgment about when to be critical. For the truly skilled thinker, such judgment is not itself the result of a critical process. Instead, it is a given of experience, a perceived affordance of the environment. And such a given needs to be acknowledged and leveraged in the learning process.

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1. Peter Facione, *The Delphi Report* (Millbrae, CA: The California Academic Press, 1990). This work will be cited as *DR* in the text for all subsequent references.
 2. Peter Facione, "The Disposition Toward Critical Thinking: Its Character, Measurement and Relationship to Critical Thinking Skill," *Informal Logic* 20, no.1 (2000): 61–84. This work will be cited as *DCT* in the text for all subsequent references.
 3. Sharon Bailin and Harvey Siegel, "Critical Thinking," in *The Blackwell Guide to the Philosophy of Education*, eds. Nigel Blake, Paul Smeyers, Richard Smith, and Paul Standish (Oxford: Oxford University Press, 2003, 181–193).
 4. In addition to the works mentioned in this article, see Robert Ennis, "Critical Thinking Dispositions: Their Nature and Assessability," *Informal Logic* 18, no. 2/3 (1996): 165–182; Robert Ennis, "Critical Thinking Assessment," *Theory Into Practice* 32 (1993): 179–186; Peter Facione and Noreen Facione, *The California Critical Thinking Dispositions Inventory* (Millbrae, CA: California Academic Press, 1992).
 5. Ennis, "Critical Thinking Dispositions."
 6. Emery Hyslop-Margison and Alan Sears, *Critical Thinking and Democratic Values* (Dordrecht: Springer, 2006), 125–152.
 7. Carol Giancarlo, Stephen Blohm, and Tim Urdan, "Assessing Secondary Students' Disposition Toward Critical Thinking: Development of the California Measure of Mental Motivation," *Educational and Psychological Measurement* 64, no.2 (2004): 348.
 8. D.N. Perkins, Eileen Jay, and Shari Tishman, "Beyond Abilities: A Dispositional Theory of Thinking," *Merrill-Palmer Quarterly* 39, no.1 (1993): 1–21.
 9. Note that there is a difference between perceiving questionability and perceiving an assertion, argument, or experience as questionable. When we perceive questionability, we perceive the degree to which something is questionable. Clearly, some assertions are highly questionable while others are not.
 10. Andrea Scarantino, "Affordances Explained," *Philosophy of Science* 70, no .5 (2002): 949–961.
 11. Hubert Dreyfus and Stuart Dreyfus, *Mind Over Machine* (New York: The Free Press, 1988).
 12. Herbert Dreyfus, "Intelligence without Representation," Cognitive Sciences Center, <http://www.class.uh.edu/cogsci/dreyfus.html>.
 13. *Ibid.*
 14. Dreyfus and Dreyfus, *Mind Over Machine*, 28.
 15. Dreyfus, "Intelligence without Representation," 3.
 16. *Ibid.* While Dreyfus's analysis of skill building is purely phenomenological, he does present neurological support, specifically Walter Freidman's attractor theory of feed-forward neural networks.
 17. *Ibid.*, 9. This idea finds expression in many aspects of our thought, where, for example, it is argued that courses in art appreciation help change students' criteria of "good" art for the better.
 18. Philip Abrami et al., "Instructional Interventions Affecting Critical Thinking Skill and Disposition: A Stage 1 Meta-Analysis," *Review of Educational Research* 78, no.4 (2008): 1102–1134.
 19. James Paul Gee, *What Video Games Have to Teach Us About Learning and Literacy* (New York: Palgrave MacMillan, 2003).