Why We Need the Imagination to Help Us with Emotional Uncertainty?
Review of Mindvaults: Sociocultural Grounds for Pretending and Imagining.
By Radu Bogdan. Cambridge, Mass.: MIT Press, 2013. 236 pp. Hardback, $35.

Among the rarified capacities of the human species, none has seemed of greater consequence to creativity and higher-level mental functioning than the imagination. But in the world of psychology, as in philosophy, art, and literary studies, there has been little consensus about what this grab bag of affective and cognitive processes boils down to at bottom. How do we find a definition of the imagination sufficiently broad to take account of what happens when we dream or create make-believe scenarios, as well as what happens when we problem-solve? Is there a connection between the non-cognitive features of imagination, such as when we feel someone else's pain, mirror their reaction, or adjust an emotional state to enter into a congruent emotional state, and specific cognitive abilities, such as deliberating, projecting images, combining ideas, formulating non-actual representations, and the like? It takes an intrepid mind to wade through the debates and formulate an account that can begin to clarify the mess.

Enter Radu Bogdan, who teaches philosophy and cognitive science at Tulane University, proposing a fresh methodology. He argues that we should look to the underlying competence that makes imagination possible by examining the selection pressures at work at each stage of human mental development. By observing the sequence of steps that lead toward the imagination, putting them in the right order, and analyzing what function they serve discretely and consecutively in adapting to the cultural and then social problems of childhood, we can explain why we have evolved an imagination and how it works. Aligning himself with cognitive scientists, Bogdan reaffirms the proposition that we cannot learn what imagination *is* simply by examining its performance outputs (for example the images, reenacted experiences, and fantasies that come to mind), just as "the competence for vision cannot be reconstructed from its outputs—the conscious visual images or their contents" (56-57). Rather than resorting to traditional approaches that start from intuition, introspection, or conceptual examination, which are hopelessly decontextualized from our evolutionary origin, Bogdan turns to evolutionary analysis, to historical, neuropsychological, genetic, and

above all developmental factors that explain imagination as a uniquely human achievement.

As a scholar of literature, I have my doubts that Bogdan's largely functionalist account of imagination captures all or even most of the important elements of this competence, of which I will say more in a moment. However I cannot help but admire both the precision of his account and the approach employed. His book is well attuned to the ordinary practical difficulties that imagination and its precursor competences, such as mental rehearsals and pretend play, help us confront first as children and later, once we have refined the capacities, as adults. The book is speculative in the best sense: Bogdan surveys a wide range of empirical evidence about how the imagination develops and by what schedule, generating informed philosophical hypotheses that order the data according to new explanatory frameworks. He insists that at their core, pretending and imagining are recently evolved mental tools that we have acquired as a means to fine-tune our behavioral responses to others, to understand the cultural roles into which we are inducted, and, a bit later in childhood, to strategize how to get what we want from other people through off-line processing. Bogdan thinks that both pretending and imagining emerge from what he calls "intuitive psychology," our need as an intelligent social species to register, track, represent, and interpret other people's mental states. He avoids the vocabulary of theory of mind, a useful impulse, even though the two ideas are closely aligned, because it suggests that the competence at issue does not deliver theoretical knowledge, but something that is practical, deliberative, and forward-looking. Bogdan insists that intuitive psychology presents a set of affordances or implications for action, a stance that he takes precisely because he is committed to an evolutionary perspective, which encourages us to recognize that high-level cognitive processes emerge from simpler practical imperatives, retaining the stamp of their lowlier origins. Much work in theory of mind makes the mistake of thinking that the assessments of other people's outlook and beliefs are abstract representations that require a disengaged or spectatorial attitude on the part of the observer, one that is analytical and epistemic rather than action-oriented in character.

It is to be regretted, then, that Bogdan frames his book as an effort to isolate intellectual abilities that are exclusively human and that stand at the top-level of our

cognitive architecture. By assuming that human imagination has no useful analogue in the animal world, he undermines what may be the most useful aspect of the style of thinking in evolutionary terms bequeathed to us by Darwin. He takes on the entrenched habit of philosophers, who from Aristotle to the present moment have sought that *special something* that elevates us from our surrounding animal kin. In his review of the available evidence, no species, with the possible exception of human-reared apes, can develop the flexible mental skills associated with imagination. According to Bogdan, this is because these capacities develop as a means of coping with our quite unique cultural frameworks and social and political lifestyles. They also require special cognitive development: reasoning, deliberate planning, thoughtful communication, and more. Young animals can emulate the action of adults of their species, but they are hampered from further intellectual development because they cannot properly engage in imitation, which requires understanding the intended means-ends directedness of the object-manipulating behavior. I, for one, would like to see a more thorough appraisal of the experimental and field data. One deficit of this book is that Bogdan does not do a good job of reviewing claims that generate considerable controversy in ethology circles. Without taking counterevidence more seriously, his book does not allow its readers to judge for themselves whether his interpretations of the available evidence is satisfactory. The eminent primatologist Frans de Waal cites some intriguing examples of cause and effect understanding in captive elephants (225) and pretend behavior in wild chimpanzees (393), and he sounds a valuable warning about the “anthropocentric bias” (34) that prevents us from taking the animal’s point of view when testing it for cognitive capacities.

One sympathizes with Bogdan’s approach, of course, because there are discernible differences between ourselves and the rest of the mammalian world (including intelligent social animals). However these differences may be in degree of complexity rather than in the kind of reasoning and knowledge that humans are capable of acquiring. In general, I would say that he is too committed to a stagist model of development, which tends to treat the work of imagination as an engineering feet that is designed in an orderly fashion and amenable to analytic reconstruction. Bogdan presents the move from mental rehearsal and pretend play to imagination as a set of

incremental cognitive skills, each requiring the completion or perfection of its predecessor to develop further. But what if the work of imagination is less an assemblage of discrete competences than a set of organic interrelationships among competences that are already existent in the higher animals, but which are applied in new ways or are combined to create greater complexity? It is unclear whether Bogdan would countenance such a possibility. He certainly concedes that imagination is not a modular response to a single selection pressure, but he also insists on separating the core competence from the surrounding performance outputs, many of which, he argues, are incidental, meaningless because they cannot be assigned large functions, or "deviant, " "collateral," or "unprogrammed uses" (58). He views natural selection as imposing discrete selection pressures that tend to produce specific adaptive functions for specific niches. But it is not clear that this "adaptationist" line is a good representation of how natural selection works even in instances where functions are more clearly evident. As the late Stephen Jay Gould never tired of reminding us, an organ built for a specific function need not restrict the capacity of the organ (Gould 12). Emphasizing the brain's flexibility, he encouraged a view of evolution that places more weight on the indeterminate functions, multiple roles, and emergent uses that any existent trait may be able to perform when an organism confronts changing circumstances. Moreover complex processes such as imaginative work may develop as a side-consequence of some other function that the brain is asked to perform, such as predicting the future, for example, generating internal complexity that exceeds purely practical purposes. This does not mean that the performance output can be discounted just because it does not originate from the organism's pressure to survive.

Since Bogdan professes to be open to the possibility that primates and ceaceans are capable of imagining—even as he doubts they can—what added difference would it make to emphasize the continuity between animal competences and human ones vis-à-vis imagining? It would force us to pay more attention to the non-cognitive features that make imagination possible, such as the primitive capacity to mirror the feelings and emotions of other members of our species, empathizing, or somatic reenactments of the experiences we witness. Since these automatic processes are emotional in nature and do not necessarily require special cognitive awareness of the virtual or vicarious status

of our response, Bogdan removes these phenomena from consideration as important instances of imagination. On the whole, his account of imagination is freighted with a number of dubious epistemic assumptions. In order for imagining to happen, he argues, we have to be able to differentiate the things we are imagining from "what is concurrently known to be real" (139); we have to quarantine the one from the other; and we have to do so in a conscious and deliberate manner. In essence, Bogdan raises a high cognitive bar for imagistic projection to count as imagination: we have to be able to monitor and regulate metacognitively what is being done with our projective thoughts. Because he does not think animals can vault this bar, they are hindered in advance.

This cognitive account of what we do when we imagine is unfortunately quite typical in philosophical and cognitive science circles, but I think the emphasis is misguided. It excludes too many ordinary responses that require us to negotiate our feelings by engaging something like imagination, whether in counterfactual worlds or in real-world settings, but which do not depend on beliefs. For instance, if we cringe at the sight of a scalpel entering an anesthetized patient, or move our hand away when we see the knife cutting through that patient's arm skin, what exactly are we doing? In one sense, we may be putting ourselves in the patient's position, but the gesture is doubly paradoxical: we know that we are not the patient, and the patient herself is not feeling the pain. So why do we do it? Perhaps we are automatically taking on the reaction of the patient (a primitive mirroring response), but only because we put ourselves in the place of the patient while in a sentient state. To do this, we may not be engaging our beliefs, let alone bracketing them; the reaction probably happens too fast. But to the degree that we think about the gesture, we acknowledge there is something non-actual about the scenario: we anticipate what it would be like to be the patient in a non-anesthetized setting, or we anticipate the future pain of the patient, and if we play out this thought, we may only increase our queasiness. Note the continuity between the primitive belief-irrelevant state and the more advanced cognitively reflective state. Is it really possible to differentiate the two forms of response across time? Of course, this instance of reaction is more online than offline (assuming that the division is secure): it has its origin in a response within a real-world setting, rather than emerging from a private powwow with oneself, where one can play out a future hypothetical or

counterfactual situation. But is this scenario radically different from what we do when we construct a negative fantasy in which we cast ourselves as a victim and experience our own outrage, strategize by placing ourselves in a projected role, or take the part of a fictional character in a novel that we know to be fictional? The example tends to undo the rigid distinctions between what we do when we project an imagined world, as opposed to dealing with our ordinary, real-world experience.

My sense is that imagination has its origin in mental responses that we share with other social animals. Some of the features and dispositions are more automatic than others. We certainly have developed rich cognitive capacities that exceed that of other animals. But while cognitive awareness helps to guide our thought process, it rarely runs the show with imagination. Once we assure ourselves that the patient in the previous example is anesthetized, does that belief allow us to diminish our response and add a practical corrective to the scene we imagine? Not really. I would argue that taking on the virtual perspective of the patient helps us to articulate to ourselves what one tends to feel when ill, for instance, or how we specifically might cope under those hypothetical circumstances. Imagination helps us to dwell with the response, to orient ourselves to the scene, to negotiate our feelings and shape our values—precisely when an immediate response is not demanded and how we are supposed to respond is not clear to us. This aspect of imagination has its origin in the social adjustments that we make to others' emotional states. And the more cognitively complex forms of thought help us to move between a simulated state (a counterfactual, future, or possible world) and our real-world situation. They help to frame or model a response, especially when the moral rules or procedures that we have accepted do not provide us with sufficient guidance. Bogdan does not say much about these aspects of imagination. He tends to treat the imagination as a functional competence that allows us to practice strategies in imaginary worlds (counterfactual states, hypotheticals, future possibilities), where the nature of the desire is clear to us, not as a form of thought and judgment that allows us to negotiate uncertainty or novel experiences in our everyday lives. The emphasis I am proposing gives more weight to feelings and emotions (something Bogdan spends very little time on), even when those responses are not directly implicated in action.

Bogdan argues that the imagination as a competence has its origin in children's mental rehearsals, specifically their socio-political strategizing, which uses "mental states as tool-like means to ends" (176). In order to get what they want, children begin engaging in offline rather than the online processing, meaning thinking that does not have to take place in the motivational present. Such adaptive responses to the pressures of juvenile sociopolitics closely align imagination as a competence with executive abilities, such as inhibiting online mentation, intentful control of one's offline thoughts, actively searching memory, and exercising top-down attention. The resulting picture presents the competence as "a more deliberate, effortful, sustained, and goal-directed mental activity than just producing or entertaining thoughts" (55). This emphasis leads him to regard daydreams and their nocturnal counterparts as imagination's side-show and not its central act because they are reflexive and unbidden, even though poets and artists have long credited such phenomena as vivid expressions of imagination at work. In other words, dreams and caprices of fancy do not qualify as advanced executive cognitive functions. It would be helpful, however, to grant that more continuity and interplay exist between imaginative abilities that impinge on executive and non-executive functions, just as it would be helpful to acknowledge a less precipitous division between online and offline processing. After all, as the encounter with an anesthetized patient shows us, or as a novel, such as Virginia Woolf's *Mrs. Dalloway,* perceptively reveals, the ability to project images, draw emotional connections across our experiences, and attune us to objects and situations—all of which are features of the imagination—happen in the midst of our workaday lives, not in a separate redoubt where we seclude ourselves for offline processing.

Bogdan makes a convincing case that the imagination emerges as a feature of, and response to, the social and broadly political experience of our species, and for me this is the most enduring achievement of his book. He does a deft job of identifying and tracking developmental changes, such as adopting multiple frames and shifting perspectives, which mark more advanced cognitive levels of aptitude and eventually enable children after the age of four to acquire imagination. The aspects of the competence that he underscores have more to do with what we might call "imaginary" than "imaginative" endeavors; in other words, he is interested in children's ability to

project nonfactual, future-oriented, or suppositional worlds—treating them as though they were something like a flight simulator for a pilot-in-training—rather than in children's need to explore their social bonds with others by noticing details and responding to new associations, discovering connections that deepen their responsiveness to the situation, and modeling potential attitudes. In the same way, with pretend play, Bogdan is more interested in children's ability to process and assimilate existent forms of cultural knowledge than he is in their way of exploring their relations to that knowledge by refining their personal attitudes to it. The "imaginative" side of the competence concerns ways of dealing with novel situations for which children's habits of response are inadequate, and they are basic to the range of experience we might refer to as "aesthetic." What I am proposing is to pay greater attention to how we process novelty, not only in cases of problem-solving and practical invention but also in the indeterminate arena of social, ethical, and aesthetic affairs. Scholars of literature who are familiar with the long history of discourse on the imagination and who are used to paying attention to aesthetic matters are perhaps well positioned to articulate why these expressive features of the imagination demand our attention. The processes of imagination are heterogeneous, but despite Bogdan's effort to create careful definitions that extricate core elements, I suspect that it is not possible to understand what the competence is without making more central the role of affective experience and non-cognitive response.

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