BELIEF AND DESIRE IN IMAGINATION AND IMMERSION*

How do imaginings, beliefs, and desires relate to yield actions and affective responses? In this paper, I will argue that any answer to this question should satisfy the following three desiderata:

(D1) Imaginings induce actions only in conjunction with beliefs about the environment of the imagining subject.

(D2) There is a continuum between imaginings and beliefs. Recognizing this continuum is crucial to explain the phenomenon of imaginative immersion.

(D3) The mental states that relate to imaginings in the way that desires relate to beliefs are a special kind of desire, namely desires to make true in fiction. These desires to make true in fiction do not differ from regular desires in kind, but only in content.

After a few preliminary remarks about terminology and the landscape of existing accounts (section I), I will specify and argue for each of these desiderata in turn (sections II through IV). By critically discussing several recent accounts of imagination, I will show how these desiderata serve as constraints on viable answers to the question of how imaginings, beliefs, and desires yield actions and affective responses.

While my focus is on analyzing how imaginings differ from and relate to other mental states, the larger aim is to gain a better understanding of the role imagination and imaginative immersion play in our cognitive lives. Imagination is a key mental capacity that plays a range of functions. By projecting ourselves into other situations, imagination allows us to expand our horizon. By conceiving of alternative possible worlds, imagination allows us to forge new paths in science and gain an understanding of alternative ways our lives could be. By thinking through what would happen given certain conditions, imagination allows us to engage in counterfactual reasoning. By creating fictional worlds and works of art, imagination allows us to develop new ideas and express old ideas in new ways.

As this range of functions brings out, gaining a better understanding of the cognitive architecture of imagination is of interest not just to philosophy of mind, but also to aesthetics and to modal epistemology. Imagination is a guide to knowing what is possible and allows us to think through what would happen given certain conditions. A better understanding of the cognitive structure of imagination will pave the way for a better understanding of how imagination can provide evidence for modal claims, a better understanding of the role of imagination in representing counterfactual scenarios, and the role of imagination in counterfactual reasoning.

I. TERMINOLOGY AND LANDSCAPE

I will work with the following necessary and sufficient conditions for a mental state being an episode of imagining.

> (IM_{NC}) A mental state is an episode of imagining only if it is directed at p being the case regardless of whether p is in fact the case.
> (IM_{SC}) A mental state is an episode of imagining if it involves the activities of pretending, visualizing, or fantasizing that p is the case.

Several explanations are required. (IM_{NC}) is a weak condition that holds not just for imaginings, but also for beliefs. The condition rules out factive mental states such as perceptions. It will prove essential that (IM_{NC}) is a weak condition to account for imaginative immersion. Imagination can be playful or rigorous, conventional or brazen. We can distinguish perception-like imaginings from intellectual imaginings, imaginings that include counterfactual reasoning and imaginings that are simply imagistic, and we can distinguish spontaneous from deliberate imaginings. What these cases all have in common is that they all satisfy (IM_{NC}): cognitive tools are used to create and think about scenarios that are not necessarily realized here and now. The child who imagines that she is a crocodile is not in fact a crocodile. The cook who imagines what the sauce would taste like with a bit of thyme has not yet tasted the sauce with the thyme he is considering adding. The utopian who dreams of world peace does not live in a world of peace.

(IM_{SC}) is a more exclusive condition, while accounting for the fact that imaginings come in many different forms. It is important to note that pretending that something is the case can be different from visualizing that something is the case. I can pretend that I am a crocodile without visualizing that I am a crocodile. I can visualize that I am Superman without pretending that I am Superman and without acting on my visualization. Similarly, fantasizing that something is the case is different from either pretending or visualizing

that something is the case. I can fantasize what my life would be like were I living in the twenty-fourth century without pretending that I am living in the twenty-fourth century and without forming any mental imagery about my life in the distant future.[1] I can imagine things that are possible, and I can imagine things that are impossible. Finally, imagining p to be the case is compatible with p being true. While working in a library, I can close my eyes and imagine my laptop being stolen. Someone could take advantage of the moment and steal my laptop. So I am imagining p even though p is true. As these examples show, the mental states that satisfy (IM_{SC}) form a hodge-podge aggregate. There is however a unifying criterion. The unifying criterion is that they all satisfy (IM_{NC}): they are all directed at something being the case regardless of whether it is in fact the case.

Imagination has been distinguished from pretense by Amy Kind, among others, on grounds that imagination is necessarily perception-like in that it involves visual imagery.[2] This strikes me as an artificial constraint on what should fall under the concept of imagination. Arguably, one can imagine emotions, social relations, and abstract entities without visualizing emotions, social relations, and abstract entities. After all, one can imagine world peace without having any visual imagery of world peace. Moreover, one can imagine being upset without forming any visual imagery. I will not constrain the notion of imagination to perception-like cases but will rather allow for the possibility that at least some imaginings do not involve mental imagery. It is worth highlighting though that those who consider visual imagery a necessary element of imagination can accept (IM_{NC}) and (IM_{SC}) as long as they understand pretending and fantasizing as requiring imagery.

On the face of it, beliefs and imaginings differ in many ways. The most important difference is arguably that, in contrast to imaginings, beliefs can be assessed for truth and falsity. For the purposes of this paper, it will suffice to think of a belief as a mental state of taking to be true. Arguably, being a mental state of taking to be true is the most minimal constraint for a mental state to count as a belief. A person who imagines that p need not take p to be true. After all, I can fantasize what my life would be like were I living in the

[1] This is denied by Nigel Thomas, who argues that imagination necessarily involves mental imagery. See his "Imagery and the Coherence of Imagination: A Critique of White," *Journal of Philosophical Research*, XXII (April 1997): 95–127.

[2] Amy Kind, "Putting the Image Back in Imagination," *Philosophy and Phenomenological Research*, LXII, 1 (May 2001): 85–109.

twenty-fourth century without taking it to be true that I am living in the twenty-fourth century. However, as I will show in section III, while imagining p to be the case does not entail taking p to be true, in the context of imaginative immersion imagining p can come very close to taking p to be true.

All accounts of imagination have it that imaginings play a distinctive cognitive role. On most accounts of imagination, beliefs and imaginings differ insofar as they are at least in part connected differently to other mental states. Formulated in modularity terminology, the idea is that imaginings and beliefs play distinctive and different functional roles that are encapsulated from one another. They decompose into distinct functional roles or boxes. While I accept that imaginings play a distinctive cognitive role, I will argue that they are only to a certain degree encapsulated from beliefs.

There are three main parameters on which accounts of imagination differ. One difference lies in the desire-like mental states to which imaginings are related. Kendall Walton, Gregory Currie and Ian Ravenscroft, Tamar Gendler, and Tyler Doggett and Andy Egan argue that there is not only an imaginary analogue to beliefs, namely imaginings, but that there is also an imaginary analogue to desires.[3] In short, the idea is that the mental representations that motivate actions when a subject *imagines* that she is, say, a crocodile are different in kind (and not just in content) from the desires that motivate her actions when she *believes* that she is a crocodile. Currie and Ravenscroft (*op. cit.*) call these imaginary analogues of desires "desire-like imaginings"; Gendler (*op. cit.*) refers to them as "make-desires"; Doggett and Egan (*op. cit.*) call them "i-desires." I will adopt Doggett and Egan's terminology and will call a view that posits imaginary analogues to desires an *i-desire view*.[4]

According to what I will call the *regular-desire view*, the desire-like mental states to which imaginings are related are of the same kind as the desires to which beliefs are related to yield actions and

[3] Kendall Walton, *Mimesis as Make-Believe: On the Foundations of the Representational Arts* (Cambridge: Harvard, 1990); Walton, "Spelunking, Simulation, and Slime: On Being Moved by Fiction," in Mette Hjort and Sue Laver, eds., *Emotion and the Arts* (New York: Oxford, 1997), pp. 37–49; Gregory Currie and Ian Ravenscroft, *Recreative Minds: Imagination in Philosophy and Psychology* (New York: Oxford, 2002); Tamar Gendler, "Imaginative Contagion," *Metaphilosophy*, XXXVII, 2 (April 2006): 183–203; and Tyler Doggett and Andy Egan, "Wanting Things You Don't Want: The Case for an Imaginative Analogue of Desire," *Philosophers' Imprint*, VII, 9 (December 2007): 1–17.

[4] In more recent work, Gendler rejects any idea of an imaginary analogue to desires and so defends a regular-desire view. See her "Alief and Belief," this JOURNAL, CV, 10 (October 2008): 634–63.

affective responses.[5] The regular-desire view is compatible with the content of the desires to which beliefs are related differing from the content of desires at play in imaginings. I will defend a regular-desire view, by arguing that the desires motivating imagination-induced actions are desires to behave in ways that make the content of imaginings true in fiction.

Doggett and Egan count David Velleman as an ally.[6] Velleman calls the mental representations that motivate actions in episodes of imagining "wishings" rather than "desires" and thus on the face of it thinks of the imaginary analogues of desire as distinct from desires. However, since on his view wishing is a kind of desire, I will count his view as a version of the regular-desire view.

A second parameter on which accounts of imagination differ lies in the role of beliefs in imagination-induced actions. On one kind of view, imaginings yield actions without being related to beliefs and without producing beliefs. I will call this the *belief-free view*. On another kind of view, imaginings yield actions by producing a belief, which in conjunction with a desire yields the relevant action. I will call this the *belief-producing view*. On a third kind of view, imaginings, beliefs, and desires jointly yield actions, but without the imagination necessarily producing a belief. I will call this the *belief-related view*. The belief-producing view can be understood as a special case of the belief-related view: it has it that imaginings are related to beliefs insofar as imaginings produce the relevant beliefs.[7]

A third parameter on which accounts of imagination differ lies in the nature of the actions that imaginings motivate. On one kind of view, imaginings motivate the imagining subject to act in much the way that the subject would behave were the content of the imaginings true. On another kind of view, imaginings motivate the imagining subject to act in ways quite different from the way the subject would behave were she not imagining but rather believing. I will call the former the *regular-action view* and the latter the *i-action view*.[8]
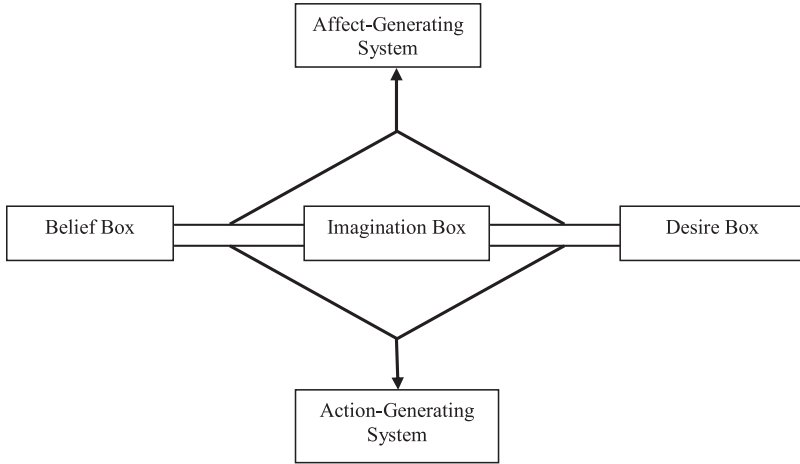
[5] A version of such a view is defended by Shaun Nichols and Stephen Stich, *Mindreading: An Integrated Account of Pretence, Self-Awareness, and Understanding Other Minds* (New York: Oxford, 2003).

[6] J. David Velleman, "On the Aim of Belief," in *The Possibility of Practical Reason* (New York: Oxford, 2000), pp. 244–82.

[7] Versions of the belief-related view are defended by Nichols and Stich (*op. cit.*) and Lucy O'Brien ("Imagination and the Motivational View of Belief," *Analysis*, LXV, 1 (January 2005): 55–62). A version of the belief-free view is defended by Doggett and Egan (*op. cit.*). I will defend a version of the belief-related view in the next section.
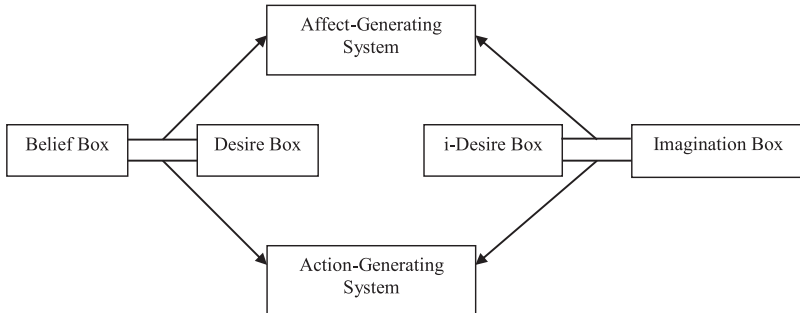
[8] A version of the regular-action view is defended by Nichols and Stich (*op. cit.*). Versions of the i-action view are defended by Velleman (*op. cit.*) and Doggett and Egan (*op. cit.*).

Nichols and Stich (*op. cit.*) and Doggett and Egan (*op. cit.*) are consistently on opposing sides of these three divides. Therefore, I will take their views as paradigmatic. The view that Nichols and Stich argue for can be depicted with the following model:

```
                    ┌──────────────────┐
                    │ Affect-Generating │
                    │     System        │
                    └──────────────────┘
                             ▲
                            / \
                           /   \
  ┌───────────┐    ┌──────────────────┐    ┌───────────┐
  │ Belief Box │═══│  Imagination Box │═══│ Desire Box │
  └───────────┘    └──────────────────┘    └───────────┘
                           \   /
                            \ /
                             ▼
                    ┌──────────────────┐
                    │ Action-Generating │
                    │     System        │
                    └──────────────────┘
```

Model A

Doggett and Egan (*ibid.*, p. 4) depict their view with the following model:

```
                       ┌──────────────────┐
                       │ Affect-Generating │
                       │     System        │
                       └──────────────────┘
                        ▲                ▲
                       /                  \
  ┌───────────┐  ┌───────────┐   ┌───────────┐  ┌──────────────────┐
  │ Belief Box │══│ Desire Box │   │ i-Desire Box │══│ Imagination Box │
  └───────────┘  └───────────┘   └───────────┘  └──────────────────┘
                       \                  /
                        ▼                ▼
                       ┌──────────────────┐
                       │ Action-Generating │
                       │     System        │
                       └──────────────────┘
```
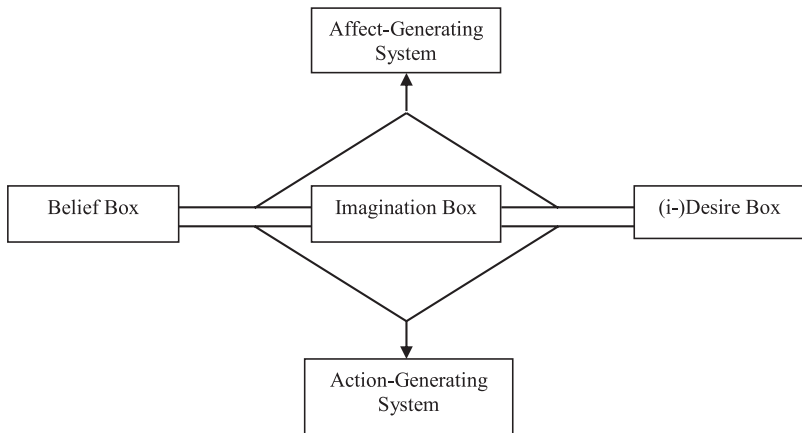
Model B

A further difference between the two views is that according to Nichols and Stich, but not Doggett and Egan, imaginings are connected to a so-called script elaborator: a mechanism that generates the propositions that a subject imagines. Since the question of how a subject can come to have imaginings does not matter for the

purposes of this paper, I will ignore the role of a script elaborator and similar mechanisms here.

In this section, I will challenge the belief-free view. I will argue that any account of imagination should recognize that imagination-induced actions are necessarily related to beliefs. So any account of imagination should accept the belief-related view. More specifically, I will argue that for a subject to be able to act out her imaginings, she needs to relate the contents of her imaginings to the contents of relevant beliefs.

Consider a subject who is imagining that she is a crocodile. She needs something to be a surrogate for the crocodile's jaws. Now assume that she believes that her arms stretched out in front of her, one hand on top of the other, would serve this purpose well. In order to act out her imaginings, she needs beliefs about her arms and she needs to assign to her arms the function of being crocodile jaws. Without doing this, she will not be able to act out her imaginings. Formulated more generally, a subject who acts out her imaginings does not just need imaginings and desires (or i-desires). Two further elements are required. The subject needs (1) beliefs about the environment and needs (2) to connect her imaginings to these beliefs. If this is right, then Model B needs to be replaced with the following model:

Model C

The point is not simply that in games of make-believe some behavior is governed by beliefs and some behavior is governed by imagination.

On Model C, imaginings do not *replace* beliefs as they do on the belief-free view.[9] So by contrast to a belief-free view, I am arguing that imaginings, beliefs, and desires jointly yield actions and affective responses.[10] This idea presupposes that a subject operates either implicitly or explicitly with a distinction between what is real and what is imagined. When a subject is imagining that she is a crocodile, she does not *stop* believing that the parts of her body that she often uses to pick up and carry objects are her arms. She does not cease to have this belief but rather *gains* a new belief, namely the belief that her arms could be surrogates for the crocodile jaws. This new belief serves an important role in her ability to act out her imagination.[11] If imaginings can only induce actions by being connected to beliefs, then a belief-free view of imagination cannot be right.

Often we engage our imagination without acting on our imagination. We may imagine being a hungry, wild ocelot without acting like a hungry, wild ocelot. I have not argued that beliefs play a role in imagination if imagination is not acted out. However, there are reasons to think that beliefs are involved even if one merely imagines acting out one's imagination. A child might imagine being a crocodile without play-acting that she is a crocodile. She might imagine lying in turbid water, with her eyes peeking out, waiting for prey. Arguably, beliefs are involved in her imagining being a crocodile even if she does not act on her imagination. After all, she has beliefs about things, such as what turbid water looks like and what it would feel like to lie in such water. Similarly, a physicist who imagines colliding particles at 5 TeV per beam will have beliefs about the Higgs boson, electromagnetic fields, and charged particle beams. An oboist who imagines achieving perfection in sound will have beliefs about how to wrap his reed, place his

---

[9] The belief-producing view is a version of this model on which the relevant belief is produced by the imagination. As noted earlier the belief-producing view can be considered a special case of the belief-related view.

[10] One particular way of developing this idea is to say that imaginings are draped over beliefs about the world. The metaphor of draping imaginings over the real world is taken up from O'Brien (*op. cit.*).

[11] If she is in a state of delusion, her belief that the parts of her body that she often uses to carry objects are her arms may be replaced by a belief that they are dangerous jaws. For a discussion of the relation between imaginings and delusions, see Currie and Ravenscroft, *op. cit.*; Currie, "Imagination, Delusion and Hallucinations," *Mind and Language*, xv, 1 (March 2000): 168–83; and Egan, "Imagination, Delusion, and Self-Deception," in Tim Bayne and Jordi Fernández, eds., *Delusion and Self-Deception: Affective and Motivational Influences on Belief Formation* (New York: Psychology, 2009), pp. 263–80.

tongue on his reed, and how much force to use when blowing air through his reed.

This brings out that at least two different kinds of beliefs matter to imagination: beliefs about the object of imagination or more generally what is imagined, on the one hand, and beliefs about how to act out what is imagined, on the other. Imagining a crocodile or being a crocodile includes, for instance, beliefs about what crocodiles look like, how they hunt, and what it feels like to have thick reptilian skin. Play-acting being a crocodile includes moreover beliefs about how one would move if one had thick reptilian skin and beliefs about whether one's arms would serve well to enact crocodile jaws.

Finer distinctions can be drawn. Some imaginings include visualization and so may include beliefs about how the object of imagination looks. Other imaginings include beliefs about properties other than how things look. When imagining, for instance, how a proof might go, beliefs about what follows from what are likely to be involved, rather than appearance-related beliefs. What these cases have in common is that they all include beliefs about what is imagined.

It should be noted that there are cases in which a subject responds with action or affect to what seem to be imaginative situations, without connecting imaginings to beliefs. Consider the following case. I am watching a movie, and at some point a celluloid tiger leaps at me from the movie screen, growling and snarling. I feel terrified. There are at least two versions of this scenario. One might experience fear because one sees a celluloid tiger jumping at one and experiences—fully aware that it is a mere celluloid tiger—what it must feel like, were a flesh-and-blood tiger to jump at one. In this case, the fear experienced is not a response to what one (mistakenly) takes to be actual danger, but rather the fear is experienced as a response to danger within the confines of the movie. So in this case, imagination plays a role: the danger is experienced as danger within the realm of fiction. I may act on my imaginings. I might put my hands in front of my eyes, not because I think a tiger is about to devour me, but because the grueling image of a tiger jumping at me is too much to bear.

Contrast this scenario with one in which I am prompted to recoil in my seat as the tiger is seemingly leaping at me. In contrast to the first case, it seems to me briefly that there is a flesh-and-blood tiger jumping at me. I am likely to refrain from running out of the cinema in panic, since my feeling of fear will probably have subsided before I take such drastic measures. My feeling of fear is likely to subside quickly since it is overlaid with a belief that there is nothing to be afraid of: after all, there is no tiger in the room.

However, although I probably would not run out of the cinema in panic, I do recoil in my seat.[12] Is this recoiling an action? The answer depends on one's notion of action. While it is a bodily movement, it is arguably not an intentional action. It is a bodily movement motivated, for instance, by a desire, namely the desire to protect my life. If this is right, then this is a case in which a fictional situation may bring forth an affective and behavioral response without any involvement of beliefs.

Is this second scenario a counterexample to the thesis that imagination-induced actions always involve relating the contents of imaginings to the contents of beliefs? I will argue that it is not, since it is not properly characterized as a case of imagination: while the celluloid tiger is fictional, at least some of our behavioral and affective responses to it do not necessarily involve imagination. If that is right, then not all fictional cases involve imagination. I will present two ways in which the behavioral and affective responses in play can be analyzed as different in kind from the intentional actions and high-level affective responses to imaginative situations.

On one possible analysis, the difference lies in the way the low-level and high-level responses are processed. The distinction between the low-level actions and affective responses, on the one hand, and the intentional actions and high-level affective responses, on the other, may be analogous to the distinction between the actions and mental states enabled through processing in the ventral and dorsal streams, respectively. According to David Milner and Melvyn Goodale's "dual visual systems hypothesis," our capacity for conscious and cognitive visual awareness depends on a processing stream (the ventral stream) that is largely independent of the processing stream (the dorsal stream) that enables behavioral responses to sensory inputs.[13] A subject's recoiling and feeling of fear in response to the

---

[12] Gendler discusses such cases in detail. See her "Alief and Belief." She calls the relevant mental states or events "aliefs" on grounds that they can in some respect be classified as beliefs but in other respects are better classified as actions. It should be noted that Gendler's aliefs make room for a way to circumvent the models proposed here. However, arguably aliefs are located at a lower cognitive level than most imaginings. It would lead too far afield to discuss aliefs in detail here. I will reserve this for a future occasion.

[13] A. David Milner and Melvyn A. Goodale, *The Visual Brain in Action* (New York: Oxford, 1995). For a discussion of reflexes, see Jerry A. Fodor, *The Modularity of Mind* (Cambridge: MIT, 1983). Fodor does not appeal to the distinction between the dorsal and the ventral stream. For a competing interpretation of cases such as a tiger seemingly leaping at one, see Bence Nanay, "Perceiving Pictures," *Phenomenology and Cognitive Science*, x, 4 (December 2011): 461–80. According to Nanay, the tiger would be represented in ventral vision but not in dorsal vision.

celluloid tiger may be responses much like the actions in response to information processed only in the dorsal stream. If this is right, then the low-level responses are not informed by personal-level mental states, such as imaginings. They are behavioral and affective responses to the situation (the leaping celluloid tiger) that are not informed by personal-level mental states that one might have about the situation. The suggestion is not that our fear responses to films are always due purely to processing in the dorsal stream. The suggestion is rather that in some cases, fear responses and other low-level responses are due purely to processing in the dorsal stream.

On a second analysis, the difference between the low-level and high-level cases lies in the cognitive stance that subjects take toward fictional situations. It is likely that one can only have low-level behavioral and affective responses if one mistakes the fictional situation as real—at least for the duration of the responses. Arguably, a subject feels fear and recoils from the celluloid tiger precisely because it momentarily seems to her as if a flesh-and-blood tiger is leaping at her. As soon as she is reminded of the fact that she is in a cinema her fear and her motivation to run are likely to subside. If this is the right analysis of what is going on in such a case, then the situation does not involve imagination, properly speaking. The subject feels fear not because she imagines that a tiger is leaping at her but because for a moment it seems to her as if a tiger is leaping at her.

On both ways of analyzing the case, the fact that there are low-level behavioral and affective responses to fictional situations does not challenge the thesis that intentional actions and cognitively higher-level affective responses to imaginative situations are necessarily filtered through beliefs about the world. After all, the low-level responses are not properly classified as responses to imaginings.

III. THE CONTINUUM BETWEEN BELIEFS AND IMAGININGS

When we immerse ourselves in a fictional world, we cease to be aware that we are imagining. Children who engage in games of make-believe and method actors are the paradigm examples of subjects who lose themselves in imagination such that the fictional world in some way, at least temporarily, becomes the real world. The most relevant characteristic of imaginative immersion is that the subject does not consciously think about the fact that she is imagining. She is immersed in fiction.

Imaginative immersion has a range of different functions. It allows us to escape from the real world; it allows us to identify with fictional characters; and perhaps most importantly it allows us to

learn and develop. By acting and feeling as if we have a perspective different than our own, we can learn what to do were we to have that perspective. When children play chase, a game widespread among mammals, they may pretend to be chased by a predator or to be a predator. Chase play is not only fun; it trains for events that are hazardous and costly. The more immersed children are in the game, the more they invest in the game; the more invested in the game they are, the more educational the game is.[14]

While imaginative immersion is characteristic of the way children play, adults can experience the phenomenon and reap the educational benefits from it. For instance, when immersed in fiction we can identify with a fictional character and thereby learn how we would act and feel were we to be in a similar situation. More generally, imaginative immersion allows us to occupy alter-ego points of view and practice new strategies by accessing possible spaces of action and affective responses.

In this section, I will argue that the phenomenon of imaginative immersion can be fully accounted for only if the functional roles of imaginings and beliefs are understood as being on a continuum. I will call this the *continuum thesis*. My aim is to establish that it is a desideratum for any account of imagination to recognize this thesis.

It is generally recognized that imagination is governed by a norm of quarantining.[15] When a subject *imagines* that she is a crocodile, she is not necessarily inclined to *believe* that she is a crocodile. Nor is she necessarily inclined to believe many of the things that would be entailed were it true that she were a crocodile. She does not, for instance, necessarily believe that she is a reptile. In cases of imaginative immersion, however, quarantining arguably can break down to some extent. The subject's mental state may start having similarities to belief. The subject may, for instance, start taking to be true whatever it is she is imagining. If I am immersed in imagining that I am a talented wizard, I may start to take it to be true that I am a talented wizard. The distinctive cognitive role of the relevant representation is to some extent belief-like and to some extent imagination-like. If this is right, then imaginings and beliefs must be on a continuum. The point is not just that imaginings and

---

[14] See Francis Steen and Stephanie Owens, "Evolution's Pedagogy: An Adaptationist Model of Pretense and Entertainment," *Journal of Cognition and Culture*, I, 4 (December 2001): 289–321.

[15] For discussions of the phenomena of quarantining, imaginative immersion, and imaginative contagion, see Gendler, "The Puzzle of Imaginative Resistance," this JOURNAL, XCVII, 2 (February 2000): 55–81.

belief differ in degree rather than in kind. The point is that accounting for imaginative immersion requires accounting for the possibility of moving seamlessly from mental states that could be called pure imaginings to mental states that are at least to some degree belief-like. We can call a mental state of imagining p a *pure imagining* if and only if it is not to any degree larger than 0 a matter of believing p or desiring p; we can call a mental state of believing p a *pure belief* if and only if it is not to any degree larger than 0 a matter of imagining p or desiring p.

The sense in which there is a continuum of mental states between imaginings and beliefs is at least in some respects analogous to the sense in which there is a continuum of color shades between yellow and red. As we can distinguish between clear cases of yellow and red while recognizing that there is a continuum between the two colors, so we can distinguish between clear cases of beliefs and imaginings while recognizing that there is a continuum between the two mental states. However, while yellow and red may be said to be on a continuum insofar as the colors between yellow and red are produced by mixing various quantities of yellow and red, the way in which beliefs and imaginings are on a continuum is more complex. The particular way in which they are understood to be on a continuum depends on how beliefs and imaginings are understood. If they are identified relative to a cluster of functional roles, then the relevant continuum can be understood as follows: with a loss of roles characteristic of imagination and a gain of roles characteristic of belief, a person comes to have a state that is intermediate between the two. For the purposes of this paper, we can remain neutral on whether the components of a modular model of the mind are best understood in terms of functional roles or in terms of Fodorian criteria such as automaticity and domain specificity. If my argument is right, it holds regardless of how modularity is understood. Regardless of whether mental states are understood in terms of functional roles or not, we can consider a minimal condition for a mental state being a belief to be that it is a state of taking something to be true. In cases of imaginative immersion, the imagining subject has mental states that are belief-like in that the imagining subject comes close to taking the subject matter of her imagination to be true.

I will address the issue of whether the continuum thesis challenges encapsulation shortly. For now it will suffice to note that recognizing the thesis is not to deny that there is a conceptual distinction between imaginings and beliefs. However, it requires accepting that when someone is in a state of imaginative immersion,

her mental state may not be easily categorized as either an imagin-
ing or as a belief—analogous to the way shades between yellow and
red may not be easily categorized as either yellow or red despite the
fact that there is a conceptual distinction between yellow and red.

The typical starting point of a game of make-believe may be a
pure imagining. As the subject immerses herself in the game of
make-believe the cognitive role of her mental state may start taking
on characteristics of the cognitive role of a belief. Arguably, one
thing that marks a good actor is the ability to swiftly move up and
down the continuum between imaginings and beliefs, that is, to
swiftly slip in and out of character. When a good actor plays a villain,
she does not simply imagine that she is a villain. She immerses her-
self in her role. In doing so, she arguably adopts mental representa-
tions that are to some extent imagination-like and to some extent
belief-like.[16] If imaginings and beliefs are on a continuum, then
Models A, B, and C cannot be right. Imaginings and beliefs should,
for instance, be in one box, as in the following model:
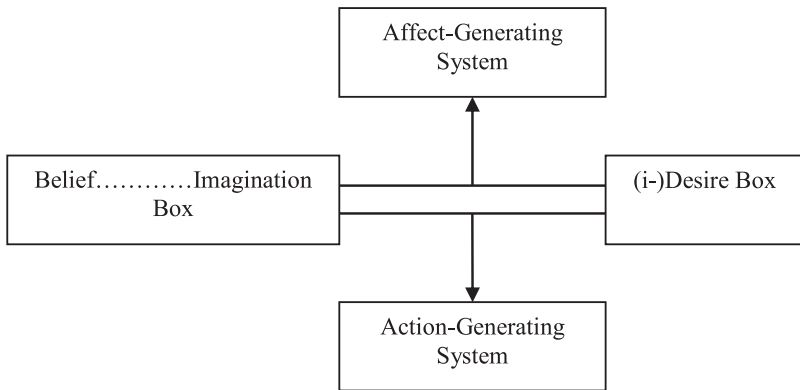
Model D

There are at least two alternative ways of accounting for the con-
tinuum thesis. One is to have three cognition boxes: a pure-belief
box, a pure-imagination box, and a mixed box. In the case of imagina-
tive immersion, propositions in the mixed box are in play. In non-
immersive cases of imagination, propositions in the pure-imagination
box are in play. A second alternative way of accounting for the

―――――――――
[16] Egan, "Imagination, Delusion, and Self-Deception," argues that states of delusion
are in certain respects imagination-like and in other respects belief-like.

continuum thesis is to have a multitude of cognition boxes: a pure-belief box, a pure-imagination box, and many boxes in between. In the case of imaginative immersion, propositions from the intermediate boxes are in play. Depending on how immersed one is, propositions from boxes closer to or farther from the pure-belief box are in play.

These are all ways to express the continuum thesis. I will work with Model D, since it is best at expressing that the continuum between beliefs and imaginings is seamless. As I have argued, the suggestion is not that there is no difference between imaginings and beliefs. The thesis is rather that whatever difference there is between pure beliefs and pure imaginings can be broken down to some extent by imaginative immersion.

If the continuum thesis is right, can we hold on to the idea that beliefs and imaginings are encapsulated? I will argue that we can. In order to defend this answer, it will be necessary to elaborate on the notion of encapsulation. When Fodor first introduced the modular model of the mind he argued that modularity should be understood to admit of degrees and that for a system to count as modular in his sense it only needs to be modular "to some interesting extent" (*op. cit.*, p. 37). Now, imagination fits almost none of Fodor's criteria for modularity.[17] But Fodor famously insisted that his criteria for modularity are neither necessary nor sufficient, but rather constitute a list of typical features of modules. Moreover, he argued that only low-level peripheral systems are modular. According to Fodor (*ibid.*), high-level cognitive systems that account for most of the phenomena that this paper addresses are not modular. In the last decades, however, several modular theories have been developed according to which high-level cognitive systems are modular in either Fodor's sense or in a functional sense.[18] Many of

----

[17] For discussion, see Currie and Kim Sterelny, "How to Think about the Modularity of Mind-Reading," *Philosophical Quarterly*, L, 199 (April 2000): 145–60, in particular pp. 149–53. Currie and Sterelny argue for a modest version of the modularity of social cognition, imagination, and responses to fiction. They argue that the mental states involved in such cognition depend on a module that takes its input from perceptual modules. One might argue that imaginings are a kind of judgment and as such a kind of occurrent belief. For such a view, see Peter Langland-Hassan, "Pretense, Imagination, and Belief: The Single Attitude Theory," *Philosophical Studies*, CLIX, 2 (June 2012): 155–79. On such a view, imaginings would stand to beliefs much like the kind of desires involved in imagination stand to regular desires.

[18] See for instance Steven Pinker, *How the Mind Works* (New York: Norton, 1997); Dan Sperber, "The Modularity of Thought and the Epidemiology of Representations," in Lawrence Hirschfeld and Susan Gelman, eds., *Mapping the Mind: Domain Specificity in Cognition and Culture* (New York: Cambridge, 1994), pp. 39–67; and Leda Cosmides and John Tooby, "Origins of Domain Specificity: The Evolution of Functional Organization," in Hirschfeld and Gelman, *op. cit.*, pp. 85–116.

these models integrate high-level and low-level systems by intro-ducing multiple levels, thereby allowing functions to be decomposed into sub-functions and further sub-functions.

The important questions for the present discussion are (i) whether a modular model of the mind can admit of degrees and (ii) if it can admit of degrees, how much can be admitted to retain an interest-ing notion of "encapsulation." One could defend the modularity model by arguing that there being a continuum between imaginings and beliefs is compatible with there being pure cases of imaginings and beliefs: what the modular model provides is an account of how pure cases of imaginings and beliefs are related to yield actions and affective responses. No doubt accounting for pure cases is a valuable component for any view of imagination. However, a com-prehensive view needs in addition to account for

(a) relations between imaginings and beliefs that are not pure and
(b) the possibility of imaginative immersion.

So as not to forfeit modularity as a useful model for a view of imagination, we need to show that the modularity model is suf-ficiently flexible to account for both (a) and (b).

As Segal has argued, mental division of labor can be more or less encapsulated.[19] The boundaries of the functionally distinguished components can be fuzzy—be they units of high-level or low-level cognitive systems. If this is right, then a modular model of the mind can admit of degrees regardless of whether the system in question is a low-level peripheral system or a high-level cognitive system. More-over, a modular model of the mind can admit of degrees regardless of whether the components are based on functional specialization or Fodorian criteria such as automaticity and domain specificity.

If the modular model admits of degrees, then (a) and (b) can easily be accounted for. However, presumably imaginative states that are belief-like relate to pure beliefs differently than pure imag-inings. More generally, even if the boundaries of the functionally distinguished components can be fuzzy, the crucial question is just how to explain what is going on in the fuzzy areas. Consider the imagination/belief box: one possible way to account for the fuzzy area is to decompose the imagination/belief box into sub-functions. Introducing such sub-functions will allow explanation of how the belief-like sub-components of a mental state relate to the imagination-like

---

[19] See Gabriel Segal, "The Modularity of Theory of Mind," in Peter Carruthers and Peter Smith, eds., *Theories of Theories of Mind* (New York: Cambridge, 1996), pp. 141–57.

sub-components. This is just one way that one can accept the continuum thesis without forfeiting modularity as a useful model for an account of imagination. There are likely to be many others.
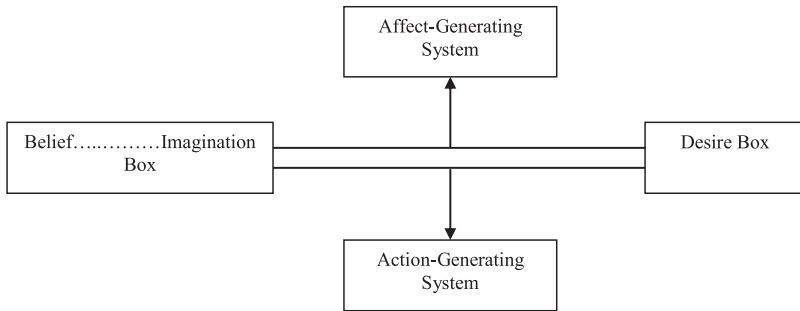
What is crucial here is that if one accepts that the modular model of the mind can admit of degrees and allows for sub-functions or non-functionally individuated sub-units, then there is no reason to reject it as too rigid. As I have argued, acknowledging that there is a clear conceptual distinction between imaginings and beliefs is compatible with accepting the continuum thesis. If we recognize, following Fodor (*op. cit.*), that modularity should be understood to admit of degrees, then we can use the modularity model to better understand how imaginings, beliefs, and desires interact to yield actions and affective responses. More specifically, we can distinguish different levels of analysis and use the modularity model to show how on certain levels of analysis imaginings and beliefs are best understood as fulfilling the same cognitive role, while on other levels of analysis the cognitive roles are best decomposed into sub-units.

I have argued that only by recognizing the continuum thesis can the phenomenon of imaginative immersion be explained. Now how could an account of imagination accommodate both the desideratum that imaginings are necessarily connected to beliefs to motivate actions (D1) as well as the desideratum that imaginings and beliefs are on a continuum (D2)? As long as one allows that cognitive roles are decomposed into sub-units, then it is no problem to account for both desiderata. A child who is immersed in a game of make-believe in which she is a crocodile will presumably not consciously think about the fact that she is using her arms as surrogates for crocodile jaws. So even if her imaginings are related to her beliefs to yield actions, she may not be consciously aware of the fact that she is using her arms as surrogates. If so, she will not be operating explicitly with a distinction between what is real and what is imagined.[20] We can acknowledge that she does not have the *occurrent* belief that she is using her arms as surrogates for crocodile jaws while recognizing that she has dispositional beliefs that these body parts are in fact arms. One possible way to account for this distinction between occurrent and dispositional beliefs while holding on to the continuum thesis is to introduce sub-functions. Introducing sub-functions allows explanation of how the belief-like components of a mental state relate to the imagination-like components of the mental state.

[20] For a discussion of the question when such states of imaginative immersion morph into states of delusion, see Egan, "Imagination, Delusion, and Self-Deception."

IV. DESIRES

A central motivation for introducing imaginative analogues of desires is to account for imaginative immersion. So far I have remained neutral between i-desire and regular-desire views. In this section, I will argue that there is no need to introduce i-desires in an account of imagination. So I will argue for a model that can be depicted in the following way:

```
                    ┌──────────────────┐
                    │ Affect-Generating │
                    │      System       │
                    └──────────────────┘
                              ↑
┌──────────────────────┐     │     ┌──────────────┐
│ Belief…..………Imagination │─────┼─────│  Desire Box  │
│         Box          │─────┼─────│              │
└──────────────────────┘     │     └──────────────┘
                              ↓
                    ┌──────────────────┐
                    │ Action-Generating │
                    │      System       │
                    └──────────────────┘
```

Model E

Velleman (*op. cit.*) argues convincingly that the actions performed in the context of games of make-believe cannot always be motivated by desires to make things true: if such actions were motivated by desires to make things true, then a child who is engaging in games of make-believe would always be aware of the make-believe character of what she is doing. However, as Velleman points out this does not seem to be a good description of how children play. Children and good actors sometimes immerse themselves in the roles they are playing. Children's actions are at least sometimes motivated by their imagining being the character they are pretending to be. In such cases, they do not act out of a desire to represent their character in action. Moreover, they do not necessarily aim to act out the character they are pretending to be in a realistic fashion. Children who are playing cops and robbers do not act like cops and robbers—not because they do not know how real cops and robbers act, but rather because they are acting according to the conventions of the game.[21]

Doggett and Egan (*op. cit.*) argue that the actions that imaginings motivate are quite different from the actions that beliefs motivate.

---

[21] For an insightful discussion of this case and many more, see Velleman, *op. cit.*, p. 255ff.; and Doggett and Egan, *op. cit.*

To take up their example, consider a child who imagines that she is a cat and so says "meow." The noise that she produces is quite different from the noise that a subject who believes that he is a cat is motivated to produce. Typically, children do not even try to imitate the sounds that cats make; rather they act according to the conventions of how people should act when they pretend to be cats. This is supported by the fact that these conventions differ to a surprising extent among cultures and language groups. When British and American children pretend to be roosters, they cry "cockadoodledoo." In German, the convention for what sound to make when one is pretending to be a rooster is "kikerikii"; in Norwegian it is "kykeliky"; and in Farsi it is "ghooghoolighooghoo."[22] Assuming that roosters make roughly the same sound in different parts of the world, this shows that when a subject imagines that she is a rooster, she is not necessarily motivated to make a sound that roosters make. She is motivated rather to make the sound posited by the conventions governing games of producing the sounds that roosters make of the particular language context she happens to be in. In short, when a subject imagines p she is motivated to act in ways that are at least potentially different from the ways she would be motivated to act were she to believe p.

If one takes these observations seriously, then it is undeniable that at least some cases of imagination-induced actions cannot be explained by desires to make true. But do we need to introduce i-desires to explain these cases? An alternative to introducing i-desires is to introduce more complicated desires, namely desires to make fictional. What are desires to make fictional? One way of analyzing such desires is to say that they are desires to make true in fiction. The idea is that when a child pretends to be a cat, she acts in the way that the conventions of the game of pretending to be a cat govern her to act. She may lick her hands, purr, walk around daintily, and, if she is an English-speaking child, she may say "meow."

Doggett and Egan consider and reject the idea that imagination-induced actions are motivated by desires to make fictional. They argue that desires to make fictional are cognitively too demanding to properly account for imaginative immersion. Consider again the child who imagines that she is a cat. According to the regular-desire view, as Doggett and Egan understand it, the child has thoughts

---

[22] Some languages, for instance Urdu, do not have a convention for how to imitate the sound that roosters make. I am indebted to Farid Masrour for advice on Farsi and Sohail Shakil for help on Urdu.

such as "What would my motivation be here? How would a tabby act in this situation?" (*op. cit.*, p. 8). As Doggett and Egan argue convincingly, children do not necessarily ask themselves questions of this kind when they engage in games of make-believe. We can call this the *over-intellectualization objection.* If the regular-desire view would entail that imagining subjects ask themselves such questions when they act on their imaginings, then it would not be able to account for imaginative immersion. So on Doggett and Egan's interpretation of the regular-desire view, it indeed faces the over-intellectualization objection.

However, the regular-desire view need not be understood in the way that Doggett and Egan interpret it. Given a better interpretation of the regular-desire view, the over-intellectualization objection can be rebutted. In the rest of this section, I will first present an alternative way of interpreting the regular-desire view of imagination and will then show how it can stave off the over-intellectualization objection. The regular-desire view has it that the desires that are paired with imaginings are desires to make fictional, that is, for instance, desires to make true in fiction. I will argue that as long as we recognize that the fact that these desires are a special kind of desire need not be salient to the imagining subject, the regular-desire view can avoid the over-intellectualization objection. It is one thing to be in a mental state that is individuated by cognitively demanding concepts (say, the concept of making fictional) and quite another thing to be aware of employing these concepts. I will argue that it is possible to be in a mental state that is individuated by the concept of making fictional without possessing the concept. In order to do so, it will be helpful to draw on the standard distinction between conceptual *content* and nonconceptual *states*:

 (i) A mental state M has conceptual content p if and only if its content is conceptually structured.
 (ii) A mental state M with content p is a nonconceptual state if and only if a subject can be in M without having the conceptual tools to individuate or articulate the content of that mental state.[23]

---

[23] The distinction between (non)conceptual content and (non)conceptual states was first introduced by Richard G. Heck, Jr. ("Nonconceptual Content and the 'Space of Reasons'," *Philosophical Review*, CIX, 4 (October 2000): 483–523, see in particular pp. 484–85). A similar distinction with different terminology was made by Robert Stalnaker ("What Might Nonconceptual Content Be?," in Enrique Villanueva, ed., *Philosophical Issues 9: Concepts* (Atascadero, CA: Ridgeview, 1998), pp. 339–52). For a helpful discussion of the distinction, see Alex Byrne, "Perception and Conceptual Content," in Ernest Sosa and Matthias Steup, eds., *Contemporary Debates in Epistemology* (Malden, MA: Blackwell, 2005), pp. 231–50.

The basic insight motivating this distinction is that the content of a mental state can be conceptually complex insofar as it is necessary to appeal to cognitively demanding concepts to individuate and articulate the content. However, a subject can be in a mental state with this content without having the conceptual tools to individuate or articulate the content of that mental state. In short, a non-conceptual state can have conceptual content.

If desires are at least sometimes nonconceptual states, then the over-intellectualization objection can be rebutted. The content of a desire to make fictional may be conceptually complex, but being in a mental state with this content need not be cognitively demanding. So if we recognize that a nonconceptual state can have conceptual content, then we can acknowledge that imagining subjects can have complex desires, such as desires to make true in fiction, without having the cognitive tools to articulate their desires. Another way of acknowledging that one can be in a complex mental state without possessing the tools to articulate the content of that state is to say that one lacks self-knowledge of the relevant mental state. A child who imagines being a rooster may be motivated to say "cockadoodledoo" without having knowledge of the complex content of her desire to do so. As with the suggestion above, room is made for the possibility of having desires to make true in fiction while lacking the conceptual resources to articulate these desires. Thereby, an intellectualist commitment is avoided.

Acknowledging that one can be in a complex mental state without possessing the tools to articulate the content of that state not only makes room for a version of the regular-desire view that does not fall prey to the over-intellectualization objection; it shows how the regular-desire view can account for imaginative immersion. I am not denying that some versions of the regular-desire view are formulated in a way that makes them subject to the over-intellectualization objection. My point is rather that a view on which no imaginary analogue of desires is introduced does not face this objection as long as we recognize that imagining subjects can have complex desires without having the cognitive tools to articulate their desires. The desires involved in imagination do not differ in kind from desires involved in belief. They differ only with regard to the complexity of their content. If this is right, then there is no need to introduce i-desires to account for imaginative immersion.

SUSANNA SCHELLENBERG
Rutgers University