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Imagination and Immortality: Thinking of Me

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Abstract

Recent work in developmental psychology indicates that children naturally think that psychological states continue after death. One important candidate explanation for why this belief is natural appeals to the idea that we believe in immortality because we can't imagine our own nonexistence. This paper explores this old idea. To begin, I present a qualified statement of the thesis that we can't imagine our own nonexistence. I argue that the most prominent explanation for this obstacle, Freud's, is problematic. I go on to describe some central features of contemporary cognitive accounts of the imagination, and I argue that these accounts provide an independently motivated explanation for the imaginative obstacle. While the imaginative obstacle does not dictate a belief in immortality, it does, I maintain, facilitate such a belief.

It is quite impossible for a thinking being to imagine nonbeing, a cessation of thought and life. In this sense everyone carries the proof of his own immortality within himself.

Attributed to Goethe (Johann Peter Eckermann, *Conversations with Goethe*, 1852).

The belief in personal immortality does not require tuition. Rather, it seems to be the default presumption in children. The idea of nonexistence strikes children as bizarre, and terrifying.¹ This is not merely a childhood belief of course. The belief in immortality is pervasive, both geographically and historically. Most people today, perhaps most people in the history of civilization, believe in some sort of personal immortality. In the *Mahabharata*, Yudhistira maintains that this is the greatest wonder of the world, that people witness death all around them, and yet they continue to believe that they are immortal.

It is indeed a great wonder that we believe we are immortal. In this paper I want to explore one proposed factor in the undergirding of this belief. I want to reconsider the old idea that the belief in immortality derives from a kind of lack of imagination – that part of the reason we believe in immortality is that we can't imagine our own nonexistence. I'll argue that contemporary cognitive accounts of the imagination can provide an explanation for why it is

¹ This assertion was based on (painful) conversations with my own children. But I've since learned that there is some recent evidence from Jesse Bering and colleagues for the claim that immortality is the young child's default belief, discussed below.

difficult to imagine our own nonexistence.² Before I can do that, I will need to sharpen the thesis that we can't imagine our own nonexistence. Stated baldly the thesis is false. After the sharpening, I'll consider Freud's proposed explanation. Freud's proposal actually fits with the influential idea that imagination is inherently self-referential, but I'll argue that the self-referential account that would support Freud's proposal is flawed. Then I'll set out some central features shared by contemporary cognitive accounts of the imagination, and I'll show how these accounts provide an independently motivated explanation for our difficulty in imagining our own nonexistence. Of course, the difficulty of imagining one's nonexistence does not necessitate a belief in immortality, but in section 7, I'll consider how this imaginative limitation might facilitate the belief in immortality. Finally, I'll consider a set of objections to my proposal.

1. Intuitive immortality

In a delightful series of experiments, Jesse Bering and his colleagues have produced evidence that the belief in a psychological afterlife is intuitive – it's the natural, default position of children (Bering 2002, Bering & Bjorklund 2004, Bering et al. 2005). They found that young children tended to appreciate that biological functions ended at death (e.g. the ears don't work), but a majority of children thought that psychological functions (e.g., thinking and wanting) would continue after death (Bering and Bjorklund 2004). Bering found a similar pattern in adults, and, more interestingly, he found that when adults *did* say that a psychological function ceased at death, they showed longer latency times than when they said that a biological function ceased at death (Bering 2002).

² The kind of imagination that will be central in this paper is the *propositional* imagination, the capacity involved in imagining that Hamlet is a prince.

In one key experiment, children are told about an alligator and a mouse, depicted with finger puppets. The children are told that the mouse is having a terrible day – he’s lost, he’s sick, he’s thirsty, and he’s very sleepy. Then the alligator and the mouse spot each other, and the alligator eats the mouse. The children are told, “Well, it looks like Brown Mouse got eaten by Mr. Alligator. Brown Mouse is not alive anymore” (Bering & Bjorklund 2004, 220). Then the children are asked questions about the continuity of a biological factor and a related psychological factor. For instance they’re asked, “Now that the mouse is no longer alive, will he ever need to *drink water* again?”, “Is he still thirsty?”, “Does his brain still work?”, “Is he still *thinking* about Mr. Alligator?”. In every single case, children were more likely to say that the psychological trait continued than they were to say that the biological trait continued. For instance, children were much more likely to deny that the mouse’s brain worked than they were to deny that the mouse was still thinking about the alligator. (Bering & Bjorklund 2004, 224).

Bering and Bjorklund argue that the child’s belief in a psychological afterlife is not simply a function of cultural training. For in addition to their general finding that children are more likely to say that psychological functions continue, Bering and colleagues have also consistently found that younger children were *more likely* than older children to think that psychological functions continue after death (Bering & Bjorklund 2004, Bering et al. 2005). If afterlife beliefs really just came from cultural training, this developmental pattern would be quite puzzling. For older kids have had more cultural training than younger children, yet they’re less likely to say that psychological functions continue after death (Bering & Bjorklund 2004, 230).

How can we explain why it’s intuitive to believe in a psychological afterlife? Bering proposes a kind of simulation-based explanation. He writes:

Simulation theory makes specific predictions about how people reason about the minds of dead agents. According to Harris (1991, p. 292), “A simulation of the other person can only be achieved if the child imagines both [a] discrepant reality, and the divergent stance that the other person takes toward it.” The afterlife poses a special problem here quite simply because it is epistemologically impossible to know what it is *like* to be dead, and thus the normal default background of personal experience with which an individual routinely uses to model others’ experiences will not be a precise match but rather an imaginary point of comparison (Bering 2002, 272)

Or, as Justin Barrett puts it in his sympathetic portrayal of Bering, “I do not know what it is like to not think anymore. I have never consciously experienced ‘not thinking,’ so I have a hard time simulating a dead person as not thinking” (Barrett 2004, 58). Thus, the idea seems to be that we naturally try to simulate the dead creature, but since we can’t simulate the absence of mental states, we meet resistance. As a result, we attribute to them a psychological continuity.

In his (also sympathetic) discussion of Bering’s work, Paul Bloom gives a slightly different explanation for why children have afterlife beliefs:

I can imagine my body being destroyed, my brain ceasing to function, my bones turning to dust, but it is harder – some would say impossible – to imagine my self no longer existing. This implies that we should find it easier to understand the cessation of biological function (death of the body) than the cessation of mental function (death of the soul). And it implies that even young children should believe that the soul survives the destruction of the body (Bloom 2004, 207).

For Bloom then, at least part of the reason we attribute psychological continuity to others after death is because of the difficulty we have in imagining our own nonexistence.³ This sets in motion the topic that I want to investigate in this essay. *Why* is it hard to imagine my self no longer existing?

2. The imaginative obstacle

The idea we can't imagine our own death is familiar. But in the 20th century, Freud provides perhaps the most visible treatment of the matter (but see also Unamuno 1921). Freud's best-known discussion of this was topical. It occurs in an essay provoked by World War I, and Freud took it to be a disturbing and telling fact that men are so willing to go to war. This is because, Freud maintained, they are convinced of their own immortality.

Our own death is indeed unimaginable, and whenever we make the attempt to imagine it we can perceive that we really survive as spectators. Hence the psychoanalytic school could venture on the assertion that at bottom no one believes in his own death, or to put the same thing in another way, in the unconscious every one of us is convinced of his own immortality. (Freud 1915, 3).

³ As we saw, Bering proposes that we naturally try to simulate the other person, and our failure leads us to believe that their psychological states continue. Somewhat similarly, Bloom's explanation for afterlife beliefs presupposes that our difficulty in imagining our own nonexistence somehow makes it difficult for us to understand the nonexistence of another. This is an interesting and substantive presupposition, worthy of serious exploration. However, due to space considerations, I cannot take it up here.

Freud has a twofold claim here. He claims that we can't imagine our own deaths; and he has a particular explanation for why we can't achieve this imaginative result. Freud's claims here have had little cachet in either cognitive science or analytic philosophy. The disdain for Freud's twofold claim is understandable, since his thesis is intolerably vague and his explanation is wrong. Let's begin by refining the thesis.

A first clarification concerns *what* it is that Freud claims we can't imagine. The claim of interest is not that people cannot imagine their own biological death – it is evident that people can imagine that. I can easily imagine that my heart stops beating and that my neurons stop firing. In short, I can imagine the death of my body. Perhaps, then, the claim is that we can't imagine our *psychological* nonexistence. However, even this weaker claim is too strong. For there is an important sense in which we can imagine our psychological nonexistence. I can imagine that no one exists who has the psychological properties that I have. One way to preserve the idea that we can't imagine our nonexistence is to invoke a familiar distinction between 1st person and 3rd person ways of thinking about oneself (e.g., Castañeda 1999, Nagel 1986, Rey 1997). It's possible to think about oneself in a 3rd person way, for instance, as a collection of particular mental states. When we think about ourselves this way, it's easy to imagine our nonexistence. But we also can think of ourselves in a distinctively first-personal way. This is manifested in typical cases of introspective self-ascriptions, as when I report that *I* am currently thinking that Bill Frisell is a great guitarist. The notion of the self that is invoked in these cases of self-ascription seems to be importantly different from the notion of self as a collection of psychological properties (see, e.g. Nichols 2000). And it is this distinctively first-personal notion of self that is at issue in the imaginative obstacle. The difficulty, as Thomas Nagel puts it, is in grasping one's own nonexistence from the first person point of view, "the internal fact that one

day this consciousness will black out for good and subjective time will simply stop. My death as an event in the world is easy to think about; the end of my world is not” (Nagel, 225). Thus, Nagel maintains that it’s false to say flatly that it’s impossible to imagine your own death, but there is a nearby truth: “The subjective view does not allow for its own annihilation” (Nagel 1986, 227). Elsewhere, Nagel puts the point as follows: “The thought that the world will go on without you, that you will become *nothing*, is very hard to take in.” (Nagel 1987, 93). The difficulty comes with imagining nonexistence from the inside, from the first person perspective.⁴

A further clarification of the imaginative limitation concerns the *tense* of the imaginative endeavor. It’s not so difficult to imagine that in the future I won’t exist. As Freud puts the imaginative problem, it emerges whenever I “make the attempt” to imagine my own nonexistence. This is not the distanced effort of imagining that in the future I won’t exist. Rather, the attempt is to imagine that *it is* some future time and I don’t exist. That is, the problem surfaces when I attempt to imagine my nonexistence as a present fact.⁵ With these clarifications in play, we can reformulate the thesis:

⁴ Another notion of “first-person imagining” is imagining what it’s like to have various experiences (see, e.g., Marcus 2004). But this isn’t the notion at issue here. The problem Nagel points to is not that I can’t imagine the *experience of* nonexistence. Of course I can’t imagine that. The problem is rather that I can’t imagine my nonexistence *simpliciter*. Thus, Nagel intimates that there is not a similar problem with imagining that I am temporarily unconscious (226). It seems relatively easy, for instance, to imagine that I am in a dreamless sleep and my cat is destroying the sofa.

⁵ Of course, there is no general problem with imagining a nonactual state of affairs as a present fact. Indeed, the typical imaginative episode proceeds this way. The reader of *Do Androids*

One can't imagine from the first-person perspective one's own present nonexistence. It's less cumbersome just to state the thesis in the first person – I can't imagine from the first person perspective that I don't exist. Let's call this the "imaginative obstacle" thesis.⁶ I'm not going to argue for the thesis. Like Freud, Goethe, and Unamuno, I find it to be a compelling fact about my imaginative abilities that they don't easily extend to imagining (from the first person perspective) that I don't exist. The primary goal in this paper will be to try to explain why we have this imaginative obstacle.⁷

Dream of Electric Sheep imagines that it is 2021 and Deckard is hunting androids (as opposed to imagining that in 2021 Deckard will hunt androids).

⁶ Although this is a plausible interpretation of the historical claim that we can't imagine our own nonexistence, the claim is probably still not quite right. For even if there is an imaginative obstacle to imagining one's own nonexistence, it might not be an absolutely impassable barrier. The imagination is a flexible engine, and there are various tricks we can do to help us get around imaginative obstacles (See Weinberg & Meskin [forthcoming] for a nice discussion.) But I will continue to treat the obstacle in the historically strong fashion until I set out my own explanation of the obstacle in section 6.

⁷ Nagel offers his own explanation for why, as he puts it, "the subjective view does not allow for its own annihilation". He claims this is because the subjective view "does not conceive of its existence as the realization of a possibility" (1986, 227). When it comes to chemistry, Nagel maintains, we understand how compounds are built up out of elements. But when it comes to mathematics, the facts seem to be utterly basic and not to depend on anything. It is similar with our considerations of continued existence:

3. Self-referential accounts of the imagination and the imaginative obstacle

Freud claims that we can't imagine nonexistence because we are always present as spectators in the exercise. If we are not already swept up in the vagaries of psychoanalysis, why should we accept Freud's explanation of the obstacle? The most obvious reason would be that the obstacle is a natural consequence of the nature of the imagination. As it happens, there is an important line of work on the imagination that comports well with this. According to 'self-referential' approaches to the imagination, to imagine that p requires being in a mental state that includes the self-concept as part of the content of the mental state. The idea is shared by quite different theories of the imagination (e.g., Peacocke 1985; Leslie 1987; Walton 1990), and there is an obvious way to develop a Freud-inspired version of the self-referential account. For

when I think of myself from the inside, there seems to be nothing still more basic which reveals the actuality of my existence as in turn the realization of a possibility of existence which is correlative with a possibility of nonexistence based on the same foundation. In other words the possibilities which define the subjective conditions of my life seem not to be explainable in turn, within a subjective view, as the contingent realization of deeper possibilities. Nothing is subjectively related to them as the existence of the elements is related to the possibility of a compound (1986, 227).

One might complain that Nagel has merely given a more complicated description of the phenomenon. Why does it seem to us that there is nothing more basic? That is, Nagel hasn't explained *why* the subjective view doesn't "conceive of its existence as the realization of a possibility". As a result, his proposal doesn't offer much of an explanation of the imaginative obstacle.

instance, Freud might maintain that whenever I imagine a scenario, I imagine myself as a spectator of the scenario (cf. Walton 1990, 214, 240, 242, 245). As a result, when I try to imagine my own nonexistence I have to imagine that I perceive or know about my nonexistence. No wonder there's an obstacle!

The Freudian self-referential account of the imagination would explain why it's problematic to imagine one's nonexistence. But the account predicts more imaginative obstacles than we actually have. For instance, there should be an obstacle to imagining that a leaf fell but no creatures knew about it. For on the Freudian self-referential account, if I imagine that a leaf fell but no one knew, I'm imagining that I am a spectator of a falling leaf that no one (including me) perceived or knew about. That too should pose a serious imaginative obstacle. But it doesn't seem remotely difficult to imagine (for related discussion see Currie 1990; Walton 1990, Meskin & Weinberg 2003). Clear problem cases also come from philosophical thought experiments. We put our students to imaginative tasks like the following:

Imagine that the universe only has rocks in it — there are no intelligent or sentient beings. Are there any logical truths in this case? Are there any moral truths?

According to the Freudian self-referential account, to imagine that the universe only has rocks in it is to imagine that I am a spectator of the universe that has no intelligent beings. Again, this should present an imaginative obstacle on the Freudian account, but these kinds of scenarios do not seem to be difficult for students to imagine. Thus, while the Freudian self-referential account would back the Freudian explanation for the imaginative obstacle, that account also predicts parallel imaginative obstacles in cases that are distinctly less difficult to imagine. So the Freudian explanation seems inadequate. For it fails to capture the narrow range of the imaginative obstacle.

4. Cognitive accounts of the imagination and imaginative blocks

Although self-referential accounts are defective, I do think that contemporary accounts of the imagination provide the best place to look for an explanation of the imaginative obstacle. In recent work, Stephen Stich and I have developed a cognitive theory of the imagination, based largely on empirical findings and empirical considerations about pretend play (Nichols & Stich 2000, 2003; Nichols 2004a, Nichols forthcoming b). A brief review of a portion of our theory will suffice for present purposes. Several features of the theory can be illustrated with a delightfully simple experiment on children by Alan Leslie. In Leslie's experiment, the child pretends to fill two cups with tea. The experimenter picks up one of the cups, upends it, and places it next to the other cup. Then the experimenter asks the child to point at the "full cup" and at the "empty cup". Both cups are really empty throughout the entire procedure, but two-year-olds reliably indicate that the "empty cup" is the one that had been turned upside down and the "full cup" is the other one (Leslie 1994).

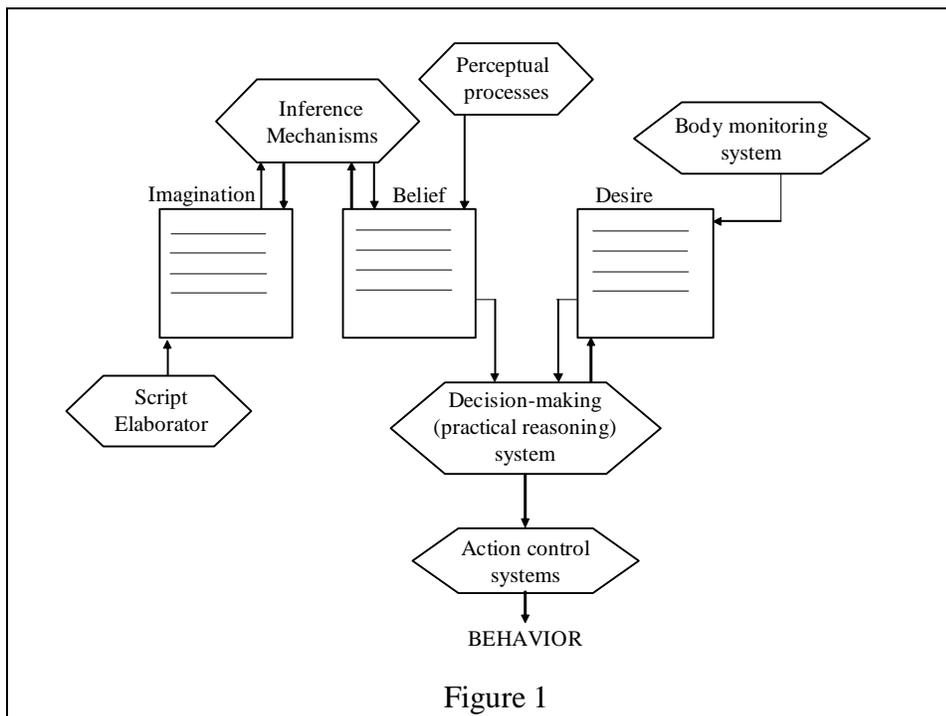
One significant feature of episodes like Leslie's tea party is that children distinguish what is pretend from what is real. That is, at no point in this experiment do children believe that either of the cups is full. Their pretense that the cup is full is "quarantined" from their belief that the cup is not full. Another, more interesting, feature of the experiment is that it indicates that a belief and a pretense can have exactly the same *content*. When the children are asked to point to the "empty cup" and the "full cup", they maintain that the previously overturned cup is the empty one. On the most natural interpretation of this, the child is *pretending that the cup is empty*. Stich and I (2003) adopt the representationalist approach that is common in this area and say that such pretending involves a "pretense representation" or "imaginational representation"

with the content *the cup is empty*. Although the child is pretending that the cup is empty, she is not blind to the fact that the cup is really empty throughout; rather, the child also *believes that the cup is empty*. This suggests that the crucial difference between imaginal representations and beliefs is not given by the *content* of the representation. For an imaginal representation and a belief can have exactly the same content. So, imaginal representations are quarantined from beliefs, and yet the distinction is not driven by differences in content. The natural cognitivist proposal, then, is that imaginal representations differ from belief representations by their *function*. Just as desires are distinguished from beliefs by their characteristic functional roles, so too imaginings are distinguished from beliefs. We exploit the familiar illustrative device of using boxes to represent functional groupings, and we propose that besides a belief box and a desire box, there is an “imagination box”.⁸ This imagination box, we suggest, is part of the basic architecture of the human mind.

In addition to an imagination box, Stich and I propose a mechanism that supplies the imagination box with representations that initiate or embellish an episode of pretense, the “Script Elaborator”. This is required to explain the bizarre and creative elements that are evident in much pretend play. However, there are also much more staid and predictable elaborations in pretend play. This too is well illustrated by Leslie’s experiment. Virtually all of the children in his experiment responded the same way when asked to point to the “empty cup”. How are these orderly patterns to be explained? In everyday life when we acquire new beliefs, we routinely draw inferences and update our beliefs. No one knows how this process works, but no one disputes that it does work. There must be some set of mechanisms subserving inference and

⁸ We originally called this the “Possible World Box”, but for philosophers, that label is likely to mislead. The label “imagination box” was introduced by Weinberg & Meskin (forthcoming).

updating, and we can simply use another functional grouping to collect these mechanisms under the heading “Inference Mechanisms”. Now, to explain the orderly responses of the children in Leslie’s experiment, we propose that the representations in the imagination box are processed by the same inference mechanisms that operate over real beliefs. Figure 1 depicts the functional architecture that Stich & I proposed.⁹



With the functional architecture in place, we can finally articulate the core idea that I want to exploit. We suggest that the representations in the imagination box and the representations in the belief box are in the “same code”, in Alan Leslie’s computational locution. Of course, it’s far from clear what the code is for representations in the belief box, so it’s not possible to be specific about the details or the nature of the putatively shared code. But the

⁹ This is Figure 3 from Nichols & Stich 2000, with minor changes in the labels.

important point for present purposes can be made without giving further detail about what the code is. The key point is just that, if imaginational representations and beliefs are in the same code, then mechanisms that take input from the imagination box and from the belief box will treat parallel representations much the same way.¹⁰ For instance, if a mechanism takes imaginational representations as input, the single code hypothesis maintains that if that mechanism is activated by the occurrent belief that *p*, it will also be activated by the occurrent imaginational representation that *p*. More generally, for any mechanism that takes input from both the imagination box and the belief box, the imaginational representation *p* will be processed much the same way as the belief representation *p*. I will count any theory that makes this claim as a “single code” theory. Although I’ve focused on the details of the account that Stich and I offer, single code theories dominate the landscape in cognitive accounts of the imagination – the single code hypothesis is shared by theorists of quite different allegiances (e.g., Currie 1995, Gordon & Barker 1996, Harris 2000, Leslie 1987, Nichols & Stich 2000, Weinberg & Meskin forthcoming). Most prominently, off-line simulation theorists count as single code theorists. For they maintain that several mental mechanisms process ‘pretend beliefs’ just like real beliefs (e.g., Gordon 1986; Goldman 1989; Harris 1992) Off-line simulation theorists often have additional

¹⁰ This doesn’t, of course, mean that the mental processing of imaginational representations will be *exactly* parallel to the processing of isomorphic belief representations. After all, the imaginational representations do not feed into all the same mechanisms as beliefs. Another obvious difference is that when the inference mechanisms (for instance) receive input from the imagination box, the outputs are typically sent back to the imagination box rather than to the belief box. These qualifications do not, I think, compromise the single code hypothesis, insofar as the qualifications seem independently plausible and well motivated.

commitments of course. For instance, many prominent versions of off-line simulation theory explicitly invoke pretend desires in addition to pretend beliefs, and also maintain that the practical reasoning system takes as input pretend beliefs and pretend desires (e.g. Gordon 1986, Currie 1995). Those additional stipulations are consistent with, but not required by, the single code hypothesis.¹¹

One of the consequences of the single code hypothesis is that if the candidate belief that *p* would be immediately rejected by the inference mechanisms, the inference mechanism will also characteristically reject the candidate imaginal representation that *p*. While it's possible to believe disguised contradictions, most philosophers (and psychologists for that matter) would agree that at least in the typical case, we cannot believe obvious contradictions like S&-S. The natural psychological explanation for this is that the inference mechanisms rebel at glaring

¹¹ One reason people have converged on the single code hypothesis comes from our impressive facility at predicting how other people would draw inferences. Why is it that we are so successful at predicting inferences? Do we have a superb theory of inference that beautifully tracks how people actually make inferences? From the earliest days of the debate between simulation and theory theory, this option has seemed massively profligate, and the simulation-based explanation has seemed overwhelmingly plausible (see Harris 1992). We are great at inference prediction because when we predict another's inferences, we exploit the very same inference mechanisms that we use when we draw inferences over our own beliefs, and those inference mechanisms treat the imaginal inputs much as they would treat belief inputs (for discussion see Nichols & Stich 2003; for some options for how this is implemented, see Carruthers forthcoming).

contradictions – they don't abide patently contradictory representations in the belief box.¹² As a result, on the single code hypothesis, just as our inferential systems would expel the belief representation S&-S, so too do they expel the imaginal representation that S&-S. Interestingly, this converges with independent work on imaginative blocks in modal judgment. If we are asked to imagine that all of mathematics is just as we think it is, and we try to imagine that $2=3$, we encounter an imaginative block (cf. Craig 1975; Blackburn 1993). On the single code hypothesis, this resistance might be explained by the fact that the imaginal representation that $2=3$ would engage our normal inferential systems. And just as our inferential systems would block the belief representation $2=3$, so too do they block the imaginal representation that $2=3$.

There is one important caveat. Although we have obstacles against imagining patent contradictions, it's not at all clear that these obstacles are absolutely insurmountable. Various tricks of presentation can enable us to circumvent the imaginative block (see Weinberg & Meskin forthcoming). For instance, Tamar Gendler tells a story in which it seems like we can imagine that $5+7$ isn't 12 (Gendler 2000). But of course, this is entirely consistent with the single code explanation for why there is an obstacle in the first place.

5. Indexicals and nonexistence

Although my impending explanation of the imaginative obstacle is no doubt transparent already, there are some significant technical complications that need to be sorted out before the

¹² There's a salient issue about what counts as a patently contradictory representation, of course.

I'm not sure where or how to draw the line, but for my purposes, it suffices to rely on uncontroversial instances of patently contradictory representations.

explanation can be adequately articulated. Let's start with a simple proposal that won't quite work.

Proposal 1: "I don't exist" is a blatant contradiction.

Obviously we would get a quick explanation of the imaginative obstacle if it turned out that "I don't exist" is a blatant contradiction. For we've already granted that the single code hypothesis explains why there is an imaginative obstacle for blatant contradictions. On some prominent account of indexicals, it seems that "I don't exist" would come out as a clear contradiction. For instance, according to Kaplan's account, "I am here now" is a logical truth (Kaplan 1989, see also Castañeda 1999). Thus, on this account, the denial of "I am here now" would presumably count as a blatant contradiction. Unfortunately, the claim that "I am here now" is a logical truth is quite controversial. Answering machines seem to provide indefinitely many counterexamples in the form of true instances of "I am not here now" (e.g., Vision 1985, Predelli 1998). Such apparently true instances of "I am not here now" threaten the idea that "I don't exist now" is an explicit contradiction. For, although it would be in very poor taste, one could easily devise a suicide-note variant of the answering machine case to argue that the sentence "I do not exist" can be true in some cases. Perhaps we can do better with a proposal that is phrased in terms of what we can *believe*.

Proposal 2: It's impossible for me to believe that I don't exist.

Although the sentence "I don't exist" may not be a contradiction, it would seem impossible for a person to *believe* that he doesn't exist. Answering machine-style objections seem unavailable for current beliefs. But the situation is complicated since a person apparently

can have a belief that he doesn't exist.¹³ For Mark can think that X doesn't exist, and he might think of X in some way that, unbeknownst to him, uniquely refers to Mark himself. Yet there also seems to be a clear sense in which Mark *can't* believe that he doesn't exist.

To sort through this, we can recruit John Perry's celebrated work on indexicals and belief. Building on ideas from Castañeda, Perry argues that sometimes when we use indexicals in attributing beliefs, there is no way to attribute the belief without using indexicals (e.g., Castañeda 1999, Perry 1977, 1979). That is, the contribution of the indexical to the belief ascription isn't equivalent to the contribution of any indexical-free description. For instance, consider a case in which Susan wakes up in a black room with total amnesia, accompanied by a headache. Susan might say to herself, "I have a headache!" But since Susan knows no descriptive information about herself, there is no indexical-free description that can fully capture the thought that Susan expresses when she says "I have a headache." Alternatively, to take Perry's example, Perry believes that the guy with the torn sack of sugar is making a mess, and even though Perry in fact *is* the guy with the torn sack, he doesn't have the belief he would express with the sentence "I am making a mess". There seems, then, to be an important difference between the belief that the-guy-with-the-torn-sack is making a mess and the belief that *I* am making a mess. This holds for other indexicals as well. Bill knows that the meeting starts at noon, but at noon, Bill fails to notice the time, and so he fails to believe that the meeting starts *now*. That's why he misses the meeting. Alternatively, at noon, Bill believes that the meeting starts *now*, but he doesn't believe that the meeting starts at noon; rather, he thinks that the meeting starts at 1:00 and at noon he thinks that it is now 1:00.

¹³ This is obviously related to the discussion in section 1, but there the focus was on whether one could imagine that one didn't exist.

To address the distinctive contribution of indexicals in these cases, one can adopt the familiar view that beliefs have two quite different aspects that can be reflected in belief ascription: roughly, a propositional object and a psychological role (e.g. Field 1978; Lycan 1988). Perry himself develops such a view (1979). According to Perry we can use sentences with indexicals to individuate belief *states* in order to classify believers for the purposes of prediction and explanation. We can also use such sentences to pick out *what* is believed, the propositional object. When we say at noon that Bill thinks the meeting starts now, we might intend to capture the propositional object – that he believes the proposition [[the meeting starts at noon]]; alternatively, we might mean to pick out Bill’s belief state for the purposes of explaining his behavior – Bill is leaving his office because he thinks the meeting starts *now*.¹⁴

Our interest here is in the processing characteristics of the belief, so we want to focus on the belief state rather than the proposition. We’re interested in the psychology, not the semantics. How should we characterize the belief state? Perry (1979) refrains from appealing to representations; rather, he maintains that we attribute belief states by using a content sentence that approximates a sentence that would be accepted by the target. For our purposes, there’s no use being coy – the cognitive theories of imagination are obviously steeped in representations. We can take belief states to be representations, and when we use a content sentence to capture the belief state, we use the content sentence to reflect salient features of the representation. There are different approaches at this juncture. Lycan proposes to capture the representation by

¹⁴ The situation might be even further complicated since it seems that a single ascription can highlight both a propositional element and an essentially indexical element. For example, we might say that Oedipus believes [[of his mother]] that she is *here*. These additional complications will not interfere with the issues in this paper.

appealing to inferential or computational role (1988, 73-4); Fodor proposes a structural isomorphism between the content sentence and the representational vehicle (1990, 169-70). We don't need to make a commitment at this point. It will suffice to say that when our goal in belief ascription is to explain behavior (and cognition) we use content sentences that reflect the "mode of presentation" of the representation. We will, however, need a notational device for indicating the mode of presentation. Italics will serve that function. We will assume that there is a distinctive mental symbol with the mode of presentation *now* that corresponds to the indexical "now", and a special symbol with mode of presentation *here* that corresponds to "here". Similarly, there is a distinctive symbol in the representational system with the mode of presentation *I*, and this corresponds to the first-person indexical "I" (see Lycan 1988, 87; Rey 1997).

As a result, when we use an indexical to characterize a person's belief, we can be guided by two different classificatory interests. On the one hand, we might try to capture the object of the target's belief, the proposition. But we also might try to capture the mode of presentation of the belief-representation. Now we can return to our initial question about whether I can believe that I don't exist. The answer is *Yes* if we focus on the propositional object of the belief but *No* if we focus on the mode of presentation. That is, I can have a belief with the same propositional object as "I don't exist", but I can't have a belief with the mode of presentation *I don't exist*. Similarly, I can have a belief with the same propositional object as "It isn't now", but not with the mode of presentation *It isn't now*. A plausible explanation for this, and the explanation I'll adopt, is that the inferential system includes a set of rules concerning various indexicals, and the mode of presentation *I don't exist* violates these rules. Even though the sentences "I don't exist"

or “It isn’t now” might not be contradictions, the inferential system would reject belief-representations of the form *I don’t exist* or *It isn’t now*.

6. A cognitive account of the imaginative obstacle

The foregoing is all pretty familiar territory for philosophers, but what is perhaps less familiar is that the two aspect issue confronts us again when we turn to the imagination. That is, we can use ascriptions of imagination either to indicate the propositional object of the imagining or to indicate the mode of presentation of the representation. If we are asked why Sally is pulling the block of wood out of the toy oven, the right answer might be “Because she is imagining that the cake is done *now*.” In this case, we are using the indexical to reflect the mode of presentation of Sally’s imaginal representation because that contributes to the explanation of her behavior. And, the familiar Castañeda/Perry moves apply. There might be no indexical-free description that could be substituted for the *now* that would sustain the explanatory power of the indexical-laden ascription. For a case that stresses the propositional aspect, suppose the following ascription is made on May 1st: “John is imagining that the government secretly changed the tax deadline from April 15th to now, and that as a result, many people will avoid late-filing penalties.” In this case, the indexical is plausibly interpreted denotationally, to reflect the actual date. The key point is *what* John is imagining, including especially the following: [[the tax deadline is May 1st rather than April 15th]]. Here then, the focus is on the propositional object of the imagining, not the mode of presentation.

Now, finally we can return to the imaginative obstacle thesis, viz., that while I can imagine my own nonexistence from the third person perspective, I can’t do it from the first person perspective. First, we should weaken the thesis to make it more plausible. Rather than

claim that it is absolutely impossible to imagine from the first person perspective that I don't exist, we can say that there is, as with contradictions, an imaginative block.¹⁵ Second, we can reformulate the thesis using the dual aspect representationalist approach to imagining. Since *I* is the mode of presentation corresponding to the first person indexical, we can reformulate the imaginative obstacle thesis as follows:

There is a block against having an imaginal representation with the mode of presentation *I don't exist*.

While I can easily have an imaginal representation with the propositional object [[I don't exist]], there's a block against an imagining with the mode of presentation *I don't exist*. The explanation for the block against an imaginal representation with that mode of presentation is subsumed under the general explanation of imaginative blocks afforded by the single code hypothesis. My inference mechanisms would block a representation with the mode of presentation *I don't exist* from getting into the belief box. Thus, since the imaginal representations are in the same code and recruit the same inferential devices as beliefs, these inference mechanisms will also block a representation with the mode of presentation *I don't exist* from residing into the imagination box. That is, since the inference mechanisms exclude the belief-representation *I don't exist*, they also exclude the imaginal representation *I don't exist*.

On the functional architecture that Stich and I propose (2000, 2003), desire provides an interesting contrast case. On our view, while beliefs find a close parallel in imaginal representations, desires do not have a close parallel kind of imaginative state (see Currie &

¹⁵ By weakening the hypothesis in this way, we can allow for the possibility that there are ways to circumvent the imaginative obstacle, as seems to be the case with explicit contradictions (see Weinberg & Meskin forthcoming).

Ravenscroft 2002 for the alternative view and Nichols 2004a for a critique). Nor do we maintain that desires are in the same code as beliefs. In addition, while the inference mechanism takes input from the imagination, we maintain that the practical reasoning mechanism does not receive input directly from the imagination. With desire, the situation is reversed. The practical reasoning mechanism takes input from desires, but the inference mechanism doesn't (see figure 1). Hence, our theory does not predict that the contents that are obstacles for belief (and imagination) will also be obstacles for desire. So, while our theory predicts that there should be an obstacle to imagining one's own nonexistence, it doesn't predict a similar obstacle for *desiring* one's own nonexistence. And this seems a good thing. Although I can't believe that *I don't exist*, it's much less clear that I can't desire that *I don't exist*.

If the single code hypothesis provides the right explanation for the imaginative obstacle, it would seem to be something common to other indexicals, not unique to *I*. That is, the foregoing explanation commits itself to a prediction about other cases. It's plausibly the case that the inference mechanisms would immediately reject a belief with the mode of presentation *It's not now* or *I'm not here*. As a result, according to the single code hypothesis, there should be a block on imaginings with the mode of presentation *It's not now* or *I'm not here*. That is, if the single code hypothesis explains why there's an imaginative block against *I don't exist*, it also predicts that there should be a block on *I'm not here*. Does that prediction bear out? Matters are somewhat delicate because it's natural to shift focus to the denotational interpretation of the indexical if that provides the only viable interpretation. So, for instance, if we hear "Joe is imagining that he isn't here," we think about *what* he imagined, e.g., that he isn't in Portland. To see whether the prediction is borne out, we need somehow to discourage the denotational interpretation of the indexical. To do this, we can recruit a technique from pragmatics. If we

construct a case in which the denotational reading would violate the pragmatic constraint against patent redundancy, then the mode-of-presentation reading should be more likely to come out. In a recent set of experiments I've attempted just this task. Subjects were asked to judge the relative difficulty of imagining various things. In one question, subjects were asked whether the following sentence was true, "It is 12:29 PM, January 17th, 2006" (it was, in fact that time and date). Then they were asked "Is one of the following easier to imagine than the other?"

- i. "It's not 12:29 PM, January 17th, 2006."
- ii. "It's not now."

Then the subjects were told, "Indicate how difficult it is to imagine" each of these, on a scale of 1-7. The results were quite clear. Subjects found "It's not now" significantly more difficult to imagine. In addition to this question, subjects were also asked whether the following sentence was true: "I am in OSH 233, at the University of Utah" (they were, in fact, in that location).

Then they were asked "Is one of the following easier to imagine than the other?"

- iii. "I am not in OSH 233, at the University of Utah."
- iv. "I am not here."

Again subjects were asked to indicate how difficult it was to imagine each of these. And again the results were very clear. Subjects found "I am not here" significantly more difficult to imagine.¹⁶

So it seems that the prediction of the single code hypothesis is borne out. Just as we can't have a belief with the mode of presentation *it isn't now* (or *I'm not here*), so too there is an obstacle to having an imagining with such a mode of presentation.¹⁷

¹⁶ In both cases, the effect was quite pronounced. For the *now* case, $t(30) = -4.261, p < .001$, and for the *here* case $t(30) = -4.667, p < .001$.

7. From the imaginative obstacle to immortality

In the epigraph to this paper, Goethe apparently suggests that the imaginative obstacle constitutes a *proof* of immortality. This is surely a dubious proof. A somewhat weaker claim is that the imaginative obstacle necessitates the *belief* in immortality. But even this seems too strong. Just because there's an obstacle to imagining that I don't exist doesn't mean that I can't believe (or imagine, for that matter), that I *won't* exist. Indeed, I do believe that I won't exist, despite the imaginative obstacle.¹⁸

¹⁷ Indeed, this might help explain another interesting phenomenon in philosophical psychology – it's notoriously difficult and disorienting to imagine the absence of space or time. Kant adverts to this in the first *Critique*, where he writes, “We can never represent to ourselves the absence of space, though we can quite well think it as empty of objects” (A24/B38-39) and “We cannot, in respect of appearances in general, remove time itself, though we can quite well think time devoid of appearances” (A31/B46). But to consider this connection adequately this would obviously require much further discussion than is possible here.

¹⁸ Another reason it's implausible to say that the imaginative obstacle necessitates the belief in immortality is that this would predict pervasive belief in retrograde immortality. The imaginative obstacle applies to the past as well as the future – there's an obstacle to imagining the conjunction of *it's currently 1850* and *I don't exist*. Yet, barring a digression on reincarnation, it seems that most people don't conclude retrograde immortality from this imaginative obstacle. This serves to reinforce the concession that the imaginative obstacle *alone* doesn't produce the belief in immortality. It can only be an important contributing factor. Another important factor might be a *general* fixation on the future (as opposed to the past) (cf. Nagel 1986, 228-9).

Rather than maintain that the imaginative obstacle necessitates the belief in immortality, we might say that the imaginative obstacle *facilitates* that belief. In other words, the fact that there is an obstacle to imagining our own nonexistence makes it natural to believe that we are immortal. Why is this natural? In part, it's natural because of the relationship between imaginability and possibility. The issues here are difficult and subtle, but on most accounts of modal epistemology, modal judgment depends crucially on the imagination. We find this view expressed by modal realists like Lewis (1986, 113-114), modal fictionalists like Rosen (1993, 340), modal primitivists like Shalkowski (Shalkowski 1996, 282) and modal expressivists like Craig (1985) and Blackburn (1993). One characteristic pattern is that if I there is a block against imagining p , this inclines me to judge that it's not possible that p (e.g. Craig 1985, Blackburn 1993, Nichols forthcoming a).¹⁹ Sometimes this inference pattern misleads us into judging that p is impossible when it isn't. Nonetheless, the inference pattern is characteristic, and Craig offers a plausible story about why it is sensible to be guided by imaginative limits: "What makes the limits of our imagination so important to us is the fact that they are also the limits within which reality must lie if it is to be intelligible" (Craig 1985, 105). If there is a block against imagining that p , then it's hard for me fully to make sense of the possibility that p .

We can now consider the relation between imaginability and possibility for the case at hand. Just as there is an obstacle against imagining S&-S, so too there's an obstacle against imagining that *I don't exist*. This imaginative limitation makes it hard for me to make sense of the possibility of my nonexistence. It is, of course, a peculiarly restricted imaginative limitation. For, as noted in section 1, I can fairly easily imagine that I won't exist in the future. The

¹⁹ Of course, the relevant sense of "can't imagine that p " is supposed to exclude performance limitations, like being too tired or distraught to imagine that p .

difficulty lies in imagining that it is the future and I don't exist. That is, I have difficulty imagining a present in which I don't exist. Matters are quite different for other possibilities. I can easily imagine a present in which I have green hair; I can imagine a present in which I wear a Star Trek uniform; I can even imagine a present in which I have no body. When it comes to these kinds of scenarios, my imagination is cooperative and yields easily. When it comes to imagining a present in which *I don't exist*, on the other hand, my imagination is stubborn and prejudiced. This distinctive imaginative obstacle makes it hard for me to grasp the possibility of a present in which I don't exist. From this perspective, my nonexistence seems bizarre and hard to comprehend. And this makes it natural to doubt the possibility of a present in which I don't exist. By contrast, believing in immortality seems to comport well with our imaginative capacities. It is accordingly natural to believe in immortality.²⁰

²⁰ As Jonathan Ichikawa has pointed out to me, one might ask why our possibility judgments here would be guided by the first-person imaginative obstacle rather than the third-person imaginative success. That is, I've maintained that there is an obstacle to imagining *I don't exist* but not to imagining *Shaun doesn't exist*. So why does the former imaginative failure trump the latter imaginative success? I think there might be an interesting answer to this question, but I don't have one, so a boring answer will have to suffice. I am merely claiming that the imaginative obstacle is one factor that makes it natural to believe in immortality. The motivation to believe in immortality is, no doubt, another important factor (see e.g., Nichols 2004b). More to the point, I don't mean to deny that there are psychological factors that compete with our inclination to believe in immortality; indeed, it's plausible that part of the reason we feel so conflicted about the possibility of mortality is precisely because it's easy to imagine non-existence from a third-person perspective.

Still, although it's natural for us to believe in immortality, we see death all around us, and frankly, it's a little disconcerting. I can recognize glancingly that this suggests that at some point I *won't* exist. But when I redirect my imaginative gaze to try to grasp directly my possible nonexistence, viz., when I try to imagine *I don't exist*, I return to the dizzying imaginative obstacle.

8. Objections

Before closing, there are a few objections that I'd like to consider.

Objection 1: The cognitive account of the imagination is unnecessary for explaining the imaginative obstacle.²¹ The explanation for the imaginative obstacle is simple:

- i. "I don't exist" is logically false.
- ii. Logical falsehoods are unimaginable.

Reply: Both claims in this alternative explanation are controversial. First, as noted in section 4, answering machine-style cases might challenge the view that "I don't exist" is logically false – the sentence "I don't exist" isn't logically false since it's sometimes *true*. Second, many philosophers maintain that logical falsehoods are not unimaginable and even that it's possible to believe disguised contradictions (e.g. Sorensen 1996).²²

²¹ Philip Robbins raised this as a possible line of objection.

²² Furthermore, in recent experiments on imaginative resistance, Brian Thompson and I found that subjects find some mathematical falsehoods significantly easier to imagine than others.

There's a deeper problem with the alternative explanation, though – it doesn't really answer our question, which is a psychological question about the contours of the imagination. Why is there, as a matter of psychological fact, an obstacle to imagining one's nonexistence? At best, the response "It's because 'I don't exist' is a logical falsehood and we can't imagine logical falsehoods" only pushes back our psychological query. Now we need to answer the question: "why can't we imagine logical falsehoods?" Again, we will have to make recourse to the psychology of the imagination to answer this question.²³ And it's likely that the psychological issues will be more complicated than is suggested by the flat claim "we can't imagine logical falsehoods." In recent pilot experiments, subjects were given several false statements and asked first whether the statement that p was true, and then how difficult it is to imagine that p . Subjects reported that it was significantly easier to imagine that $37 \times 8 = 294$ than that $2 \times 2 = 7$ (Nichols and Thompson in prep).²⁴

²³ Some might maintain that it's a *logical truth* (or perhaps an analytic truth) that logical falsehoods are unbelievable and unimaginable, because belief and imagination are defined such that S believes/imagines that p only if it is possible that p . However, this seems a misleading way to characterize our lay notions (see Sorensen 1996). In addition, if we adopt a notion of imagination on which it's a logical truth that we can't imagine logical falsehoods, then we certainly have not explained why there is an imaginative obstacle. For the imaginative obstacle, as characterized above, is an empirical fact about our psychology, not a logical deduction.

²⁴ The effect was quite clear: $t(35) = -5.23, p < .001$. We also found a difference in the imaginability of countermoral claims. Subjects maintained that it was morally wrong to lie to evade punishment, but they found it much easier to imagine that it's okay to lie to get out of punishment than that it's okay to kill people simply because they have green eyes.

Given the controversies and complexities outlined in the preceding paragraphs, I have opted to forego the question “why is there an obstacle against imagining logical falsehoods?” in favor of the more focused question “why is there an obstacle against imagining *I don't exist*?”

Objection 2: We can easily imagine things that entail our nonexistence. For instance, we can imagine that all that exists are rocks and the void. But we can't believe things that entail our nonexistence. So the very problem that arose for the self-referential explanation also undermines the single code explanation of the imaginative obstacle.

Reply: The first thing to say is that it is possible to *believe* things that entail our nonexistence. For instance, I might falsely believe that the universe has such and such physical properties which, unbeknownst to me would make the existence of life impossible. This is similar to the situation with believing contradictions. Plausibly, it is a general feature of belief that while we can't have belief representations that are patent contradictions, we can have belief representations that are disguised contradictions (and so entail all contradictions). Similarly, then, we can have imaginal representations that are disguised contradictions (and so entail all contradictions) even if we can't imagine patent contradictions. And we can imagine things that entail our nonexistence even if we can't have an imaginal representation with the mode of presentation *I don't exist*.

Still, one might press, this does not evade some of the crucial cases. No one could believe that there were only rocks in the world, but we *can* imagine this. Indeed, we can actually get pretty far imagining rock world, as evidenced by discussions in metaphysics. Meeting this problem requires more subtlety. The key reply is that, so far as the inference mechanisms are

concerned, it is possible to believe that there are only rocks in the world. However, that belief would quickly be rejected because of other elements in the cognitive economy. The belief that there are only rocks contradicts other obvious beliefs of ours, and so, while the inference mechanisms would allow the belief, the combination of inference mechanisms plus background beliefs will exclude it. In the imagination, the background representations are negotiable.²⁵

9. Conclusion

In many ways, the imagination has the virtue of not being subject to the restrictions of belief. I can imagine all sorts of thing that I never have and never will believe. I can imagine things that are thoroughly implausible, that are vanishingly improbable, that are utterly ridiculous. I can imagine that the world is only 5 minutes old, but I would never believe it. I can imagine that pigs converse with each other, but I think only a crackpot would actually believe that. However, there is another sense in which imagination is restricted in just the same way that belief is restricted. I am restricted from imagining things that are excluded by the inference mechanisms. The single code hypothesis gives a principled account of these important limits on my imagination. One of these limits is on my ability to imagine that I don't exist.

Acknowledgements:

²⁵ Nichols (forthcoming b) describes cases in which there are important differences in the pattern of inferring exhibited in some parallel cases of believing that *p* and imagining that *p*. However, that paper argues that these cases might be accommodated without abandoning the single code hypothesis.

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References:

- Barrett, J. (2004), *Why Would Anyone Believe in God?* New York: Altamira Press.
- Bering, J. M. (2002), "Intuitive conceptions of dead agents' minds: The natural foundations of afterlife beliefs as phenomenological boundary," *Journal of Cognition and Culture*, 2, 263-308.
- Bering, J. and Bjorklund, D. (2004), "The Natural Emergence of Afterlife Reasoning as a Developmental Regularity." *Developmental Psychology*, 40, 217-33.
- Bering, J., Hernández-Blasi, C., and Bjorklund, D. (2005), "The Development of "Afterlife" Beliefs in Religiously and Secularly Schooled Children," *British Journal of Developmental Psychology*.
- Blackburn, S. (1993), "Morals and Modals." In *Essays in Quasi-Realism*. Oxford: Oxford University Press.
- Bloom, P. (2004), *Descartes' Baby*. New York: Basic Books.
- Carruthers, P. (forthcoming), *The Architecture of the Mind*. Oxford University Press.

- Castañeda, H-N. (1999), *The Phenomeno-Logic of the I: Essays on Self-Consciousness*. Indiana University Press.
- Craig, E. (1975), "The Problem of Necessary Truth". In *Meaning, Reference and Necessity*, S. Blackburn (ed.). Cambridge University Press.
- Craig, E. (1985), "Arithmetic and Fact." In *Exercises in Analysis*, I. Hacking (ed.). Cambridge University Press.
- Currie, G. (1990), *The Nature of Fiction*. Cambridge University Press.
- Currie, G. (1995), "Imagination and Simulation: Aesthetics Meets Cognitive Science." In *Mental Simulation: Evaluations and Applications*, A. Stone and M. Davies (eds.). Oxford: Basil Blackwell.
- Field, H. (1978), "Mental Representation." *Erkenntnis*, 13, 9-61.
- Fodor, J. (1990), "Substitution Arguments and the Individuation of Belief." In his *A Theory of Content and Other Essays*. Cambridge, Mass.: Bradford Books/MIT Press.
- Freud, S. (1915), "Thoughts for the Times on War and Death."
- Gendler, T. (2000), "The puzzle of imaginative resistance." *Journal of Philosophy*, 97, 55-81.
- Goldman, A. (1989), "Interpretation Psychologized," *Mind & Language* 4, 161-185.
- Gordon, R. (1986), "Folk Psychology as Simulation," *Mind & Language*, 1, 158-170.
- Gordon, R. and Barker, J. (1994), "Autism and the 'Theory of Mind' Debate." In *Philosophical Psychopathology: A Book of Readings*, G. Graham & G. L. Stephens (eds.). Cambridge, MA: MIT Press.
- Harris, P. (1992), "From simulation to folk psychology: The case for development," *Mind & Language* 7, 120-144.
- Harris, P. (2000), *The Work of the Imagination*. Oxford: Blackwell Publishers.

- Kant, I. (1968), *Kant's Critique of Pure Reason*. Translated by N. Kemp Smith. New York: St. Martin's.
- Kaplan, D. (1989), "Demonstratives." In J. Almog, J. Perry, & H. Wettstein (eds.) *Themes from Kaplan*. Oxford University Press.
- Leslie, A. (1987), "Pretense and representation: The origins of 'theory of mind'." *Psychological Review*, 94, 412-426.
- Leslie, A. (1994), "Pretending and believing: Issues in the theory of ToMM." *Cognition*, 50, 211-238.
- Lewis, D. (1986), *On the Plurality of Worlds*. Oxford: Blackwell Publishers.
- Lycan, W. (1988), *Judgement and Justification*. New York: Cambridge University Press.
- Marcus, E. (2004), "Why Zombies are Inconceivable," *Australasian Journal of Philosophy*, 82, 477-490
- Meskin, A. and Weinberg, J. (2003), "Emotions, Fiction, and Cognitive Architecture," *The British Journal of Aesthetics*, 43, 18-34.
- Nagel, T. (1986), *The View from Nowhere*. Oxford: Oxford University Press.
- Nagel, T. (1987), *What Does It All Mean?* New York: Oxford University Press.
- Nichols, S. (2000). "The Mind's "I" and the *Theory of Mind*'s "I": Introspection and Two Concepts of Self." *Philosophical Topics*, 28, 171-199.
- Nichols, S. (2004a), "Imagining and Believing: The Promise of a Single Code," *Journal of Aesthetics and Art Criticism*, 62, 129-139.
- Nichols, S. (2004b), "Is Religion What We Want? Motivation and the Cultural Transmission of Religious Representations." *Journal of Cognition and Culture*, 4, 347-371.

- Nichols, S. (forthcoming a), "Imaginative Blocks and Impossibility: An Essay in Modal Psychology." In *The Architecture of the Imagination: New Essays on Pretense, Possibility, and Fiction*. S. Nichols (ed.). Oxford: Oxford University Press.
- Nichols, S. (forthcoming b), "Just the Imagination: Why Imagining Doesn't Behave Like Believing." *Mind & Language*.
- Nichols, S. and Stich, S. (2000), "A Cognitive Theory of Pretense." *Cognition*, 74, 115-147.
- Nichols, S. and Stich, S. (2003), *Mindreading*. Oxford: Oxford University Press.
- Nichols, S. and Thompson, B. (in prep.), "Imaginative Resistance meets Experimental Philosophy."
- Peacocke, C. (1985), "Imagination, Experience, and Possibility: A Berkeleyan View Defended." In *Essays on Berkeley: A Tercentennial Celebration*. J. Foster and H. Robinson (eds.). Oxford: Clarendon Press.
- Perry, J. (1977), "Frege on Demonstratives." *Philosophical Review*, 86, 474-97
- Perry, J. (1979), "The Problem of the Essential Indexical." *Nous*, 13, 3-21.
- Predelli, S. (1998), "I am not here now." *Analysis*, 58, 107-15.
- Rey, G. (1997), *Contemporary Philosophy of Mind*. Oxford: Blackwell Publishers.
- Rosen, G. (1990), "Modal Fictionalism." *Mind*, 99, 327-354
- Shalkowski, S.A. (1996), "Conventions, Cognitivism and Necessity." *American Philosophical Quarterly* 33: 375-92.
- Sorensen, R. (1996), "Modal Bloopers: Why Believable Impossibilities Are Necessary." *American Philosophical Quarterly*, 33, 247-261.
- Unamuno, M. (1921), *Tragic Sense of Life*. Trans. J. Fitch. Dover.
- Vision, G. (1985), "I am here now." *Analysis*, 45, 198-199.

Walton, K. (1990), *Mimesis as Make-Believe*. Cambridge, MA: Harvard University Press.

Weinberg, J. and Meskin, A. (forthcoming). “Puzzling Over the Imagination: Philosophical Problems, Architectural Solutions.” In *The Architecture of the Imagination: New Essays on Pretense, Possibility, and Fiction*. S. Nichols (ed.). Oxford: Oxford University Press.

Young, A. and Leafhead, K. (1996), “Betwixt life and death: Case studies of the Cotard delusion”. In P. Halligan & J. Marshall (eds.) *Method in Madness: Case Studies in Cognitive Neuropsychiatry*. Hove: Psychology Press.