Imagination and the puzzles of iteration

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Iteration presents opposing puzzles for a theory of the imagination. The first puzzle, noted by David Lewis, is that when a person pretends to pretend, the iteration is often preserved. Let's call this the puzzle of 'preserved iteration'. At the other pole, Gregory Currie has noted that very often when we pretend to pretend, the iteration does collapse. We might call this the puzzle of 'collapsed iteration'. Somehow a theory of the imagination must be able to address these two puzzles. I argue that an empirically inspired cognitive theory of the imagination (Nichols & Stich 2000) can accommodate both puzzles.

1. A cognitive theory of the imagination

Drawing largely on empirical findings and empirical considerations about pretend play, Stephen Stich and I have developed a cognitive theory of the imagination (Nichols & Stich 2000). Several features of the theory can be illustrated with one of Alan Leslie's experiments on children. In Leslie's experiment, the child pretends to fill two cups with tea. Subsequently the experimenter picks up one of the cups, upends it and shakes it, and replaces 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 important 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 pretence 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 pretence 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 adopt the representationalist approach that is common in this area and say that such pretending involves a 'pretence 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 pretence representations and beliefs is not given by the *content* of the representation.

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For a pretence representation and a belief can have exactly the same content. So, pretence representations are quarantined from beliefs, and yet the distinction is not driven by differences in content. The obvious cognitivist proposal, then, is that pretence representations differ from belief representations by their *function*. Just as desires are distinguished from beliefs by their characteristic functional roles, so too are pretence representations distinguished from beliefs (see also Currie 1995). Stich and I exploit the familiar illustrative device of using boxes to represent functional groupings, and we propose that there is, in addition to a belief box and a desire box, a 'pretence box'.[1] This pretence box, we suggest, is part of the basic architecture of the human mind. There is, we maintain, a close symmetry between believing that *P* and imagining that *P*. To believe that *P* is to have a representation with content *P* in one's belief box; to imagine that *P* is to have a representation with content *P* in one's pretence box.

Although the pretence box account of the imagination was motivated by empirical considerations, if this account is to provide an adequate theory of the imagination, it must be able to navigate through the many puzzles of fiction philosophers have assembled. Hence, if the account can't accommodate the puzzles of iteration, that will count against it.

2. *The puzzle of preserved iteration*

The best known puzzle concerning iterated pretence comes from David Lewis. In Lewis's puzzle of the flash stockman, a singer performs a song in which he pretends to be Ugly Dave telling boastful lies about himself. Lewis asks,

> Why doesn't the iteration collapse? When the singer pretends to be Ugly Dave pretending to tell the truth about himself, how does this differ from pretending to be Ugly Dave really telling the truth about himself? It must be the former, not the latter; else we should conclude that there is no inner fiction and that what is true in the outer fiction – now the only fiction – is that Ugly Dave is duke of everything and tells us so. That would be to miss the point entirely. We must distinguish pretending to pretend from really pretending. Intuitively it seems that we can make this distinction, but how is it to be analyzed? (1983: 280)

[1] Stich and I use the term 'Possible World Box' to pick out the pretence box (Nichols & Stich 2000). But the notion of Possible World that we invoke differs from the notion philosophers associate with the term. Since this paper is aimed primarily at philosophers, I've adopted a term with less philosophical baggage.

Lewis himself offers no solution to this puzzle of preserved iteration. Peter Lamarque does offer a solution. He suggests that impersonation or mimicry plays a key role in the flash stockman case: 'Pretending, like impersonation, has characteristics of its own which can be mimicked. The difference Lewis wants between pretending to pretend and just pretending is the difference between mimicking a pretence and mimicking the real thing' (Lamarque 1987: 94). Lamarque's proposal relies on the assumption that mimicking a pretence and mimicking the real thing are distinguished by 'salient characteristics':

> The singer, in pretending to be Ugly Dave, must mimic the characteristics of a boaster, that is, someone pretending to be something he is not. This is by no means the same as pretending to be Ugly Dave telling the truth about himself. The salient characteristics of a lying boaster are different from the salient characteristics of a truth-telling high-achiever. (1987: 94)

One problem with this proposal is that it's not clear that there must be discernible differences between mimicking a pretence and mimicking the real thing. A child who wants to annoy her older sister might try to mimic exactly the older sister's pretence of cooking. In such a case, apart from the delay between the older child's and the younger child's behaviour, one might not be able to tell which child was mimicking the pretence and which child was mimicking the real thing. More importantly, even if the mimicry approach explains the flash stockman case, it is not a sufficiently general solution to the puzzle of preserved iteration. For the puzzle of preserved iteration isn't restricted to pretend activity. Iteration that is tucked wholly within a reader's imagination often doesn't collapse. The naive reader of Robert Nye's *Falstaff* might imagine that Falstaff's birth coincided with an earthquake. But the seasoned reader of this novel imagines that Falstaff only imagines that his birth coincided with an earthquake. For such a reader, it is crucial to *Falstaff* that we imagine that Falstaff is imagining self-aggrandizing events and exploits. No behavioural mimicry is involved here. Hence, we still need some explanation for why such iteration in the imagination doesn't collapse.

The pretence box account provides a general solution to the puzzle of preserved iteration. To imagine about imaginings is to have a representation in one's pretence box that attributes imagining. The seasoned reader of *Falstaff* has in his pretence box a representation with the content *Falstaff is imagining that his birth coincided with an earthquake.* On the pretence box account, this is closely parallel to having a belief representation that attributes imagining. Indeed, a reader who mistakes *Falstaff* for an autobiography will come to have a belief representation that *Falstaff is imagining that his birth coincided with an earthquake* and this will

be isomorphic with the proper reader's pretence representation that *Falstaff is imagining that his birth coincided with an earthquake.*

3. The puzzle of collapsed iteration

The above solution to the puzzle of preserved iteration is an obvious consequence of a pretence box account of the imagination. For on that account there is a close parallel between believing and imagining. However, this solution apparently makes a related puzzle all the more daunting. Gregory Currie observes that iteration brings out an obvious *asymmetry* between believing and imagining. For unlike iterated beliefs, iterated imaginings often *do* collapse, and we need an explanation for this: 'Why does imagining that someone imagines *P* tend to collapse into imagining *P*, whereas, for example, believing that someone believes *P* rarely collapses into believing *P*?' (Currie 1995: 161). When we read in *A Thousand and One Nights* about Scheherazade telling stories to Sultan Schahriar, we often lose ourselves in Scheherazade's story itself and forget that it's a story being told to the Sultan. Why does the iteration collapse here? On the pretence box account, in the *Falstaff* case we have in our pretence box a representation with the content *Falstaff is imagining that his birth coincided with an earthquake*. When we read Scheherazade's story of Sindbad, our pretence box could similarly have the full pretence representation, *Scheherazade is imagining that Sindbad's ship is attacked by a huge bird*. However, it seems that we quickly begin to imagine just the embedded story itself – we imagine simply that Sindbad's ship was attacked by a huge bird. Hence the puzzle of collapsed iteration.

Currie's own proposed solution to the puzzle is to appeal to a limitation of the faculty of imagination, which, according to Currie, is a kind of simulation.

> If imagining is simulation, then imagining someone's imaginings is a matter of simulating her simulation, and it would not be very surprising if we lacked so complex a mechanism as a simulator within a simulator.... it is plausible that we lack the capacity to run nested simulations and if we do, that explains the collapse of iterativity. (Currie 1995: 161)

On this proposal, then, iteration collapses because the imagination lacks the capacity to preserve iteration. Although this suggestion might explain why the iteration collapses, it runs into the problem that now it can't accommodate the puzzle of preserved iteration. That is, if we explain the puzzle of collapsed iteration by maintaining that the imagination can't preserve iterations, then we can no longer capture the fact that in many cases, like the flash stockman and *Falstaff*, the iteration is in fact preserved.

On the pretence box view, imagining that *P* and believing that *P* involve isomorphic representations. But this alleged symmetry looks to be threatened by the asymmetry that Currie marks. I hope to explain the asymmetry without compromising on the basic claim that pretence representations are isomorphic to belief representations. To explain why iterated imaginings often collapse but iterated beliefs don't, I want to invoke a process that Stich and I discuss elsewhere (Stich & Nichols 1997), which we can call *relocation*.[2] In relocating, we literally put ourselves in the other person's situation (or a closely similar situation), and from this position we can see which mental states or behaviours follow. So, for instance, if you want to know how things would look to a person peering into an Ames room, one reliable strategy is to look in the Ames room yourself. Since it's likely that your visual system is quite similar to the target's visual system, it's plausible that her perception of how things look will be much the same as yours. While the relocation strategy can be extremely reliable, it is also rarely available for predicting behaviour (Stich & Nichols 1997: 302). However, it's an important fact about the imagination that it lends itself readily to relocation, and this might provide an explanation for the collapse of iterative imaginings. That is, if I am imagining that Scheherazade is imagining that *P*, I can always just put myself in her place and imagine that *P*. However, if I believe that John believes that *P*, often I can't simply put myself in John's place and believe that *P*. Here, then, is the relevant asymmetry between imagination and belief. I can typically put myself into another person's situation to imagine what they are imagining, but I typically can't relocate myself into another person's situation to believe what they believe.[3] This asymmetry between imagination and belief explains why iterated imaginings might collapse but iterated beliefs don't. It also can accommodate the fact that iterated imaginings don't *always* collapse. The collapse occurs when we put ourselves in the place of the imaginer. But we can resist doing so. And in certain fictions, like the flash stockman and *Falstaff,* resistance is encouraged.

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[2] When Stich and I discussed this process, we were interested in distinguishing different notions of 'simulation', and so we called the process 'actual-situation-simulation' (Stich & Nichols 1997).

[3] The asymmetry isn't limited to strict iteration – if I actually believe that John is imagining that *P* (as when I hear him spinning a story), I can easily put myself in John's place and imagine that *P*. However, if I imagine that John believes that *P*, I typically can't put myself in a situation in which I come to believe *P*.

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