

Imperatives, Phantom Pains, and Hallucination by Presupposition

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Abstract

Several authors have recently argued that the content of pains (and bodily sensations more generally) is imperative rather than descriptive. I show that such an account can help resolve competing intuitions about phantom limb pain. As imperatives, phantom pains are neither true nor false. However, phantom limb pains *presuppose* falsehoods, in the same way that any imperative which demands something impossible presupposes a falsehood. Phantom pains, like many chronic pains, are thus *commands that cannot be satisfied*. I conclude by showing that some of the negative psychological consequences of chronic pain are a direct consequence of their imperative nature.

1 A Puzzle About Phantom Limb Pain

Amputation occasionally results in the persistent hallucination that the missing limb is still present (Ramachandran and Hirstein [1998]). Distressingly, these so-called ‘phantom limbs’ can be quite painful. Of a friend whose arm had been amputated due to gas gangrene, W.K.

Livingston writes:

I once asked him why the sense of tenseness in the hand was so frequently

emphasized among his complaints. He asked me to clench my fingers over my thumb, flex my wrist, and raise the arm into a hammerlock position and hold it there. He kept me in this position as long as I could stand it. At the end of five minutes I was perspiring freely, my hand and arm felt unbearably cramped, and I quit. But you can take your hand down, he said. (Quoted in Melzack [1973] 53)

In addition to the obvious medical issues, phantom limb pain also raises philosophical questions. Here's a thorny one: are phantom limb pains *hallucinations*?

Intuition pulls both ways. On the one hand, many have the sense that phantom limb pain is *misleading*. Pain in a hand that does not exist seems like a mistake, in the same sense that the tactile hallucinations accompanying phantom limbs are mistakes (Tye [1995] 227, Hardcastle [1999] 124-6). On the other hand, we do not normally speak of pain as the sort of thing that can be veridical or nonveridical (Block [2005] 138). If a pain is there, we might say rhetorically, it is *there*: it strains common sense to speak of true and false pains.

These intuitions are far from certain, and different people feel them with different force. Representationalists tend to treat the first intuition as the more compelling, for example, while qualia theorists feel the second more strongly. Nevertheless, it would be desirable if our theory of pain explained both intuitions.

I have argued elsewhere for an *imperative* account of pain.¹ On my account, the content of pain is an imperative: a *command* against using a part of your body in certain ways. The pain of a broken ankle says, roughly 'Don't put weight on that ankle!'; the pain of a burn proscribes against bringing the affected area into contact with anything. I subscribe to a relatively austere

version of the imperative account, on which these proscriptions against action exhaust the content of pains.

The imperative theory of pain has a number of philosophical advantages. It makes the phenomenal properties of pains supervene on their content, and so inherits the philosophical virtues of intentionalism. It makes clear why pains (and other bodily sensations) have an especially direct motivational force. It fits well with a plausible biological story about the protective role of pains: the primary function of pain is to protect the body, and imperative content can serve that end rapidly and efficiently. It gives pain a unitary content despite the variety of states that can cause pain. Pains protect us against potential damage, help us heal from actual damage, and cause us to take care after recently healed damage. There is no single state of the world that is common to these cases, but there is a common demand on the agent: to cease inappropriate activity. Finally, the imperative theory accounts for the intuition that pains are inherently motivating, and in a way that is consistent with puzzling phenomena like morphine pain.

I will argue that the imperative account can also shed light on some of the puzzling aspects of phantom limb pain. To begin, note that it cleanly accommodates the second intuition that pains are neither true nor false. Imperatives do not have truth-values. Commands like:

Clean up that broken glass!

Tell me who burned the broom!

Don't cause any more trouble!

are neither true nor false. They may be 'wrong' in various other ways—unsatisfied, unsatisfiable, illegitimate, etc.—but it makes no sense to speak of them as true or false. So too with pains. The phenomenal commands:

Don't put weight on that ankle!

Don't let that burned patch of skin touch things!

Don't get your hand any closer to the flame!

are neither true nor false. Imperatives just aren't like that.

What about the first intuition, that phantom pains are misleading? Since imperatives can't be wrong, the imperative account looks to be at a disadvantage. I do think that an imperative account can account for this intuition. Before giving the full story, though, I should address two straightforward, conservative ways in which an imperative account might defend itself. First, even if imperatives are not themselves truth-apt we may still *infer* true propositions from the fact that a given imperative has been issued. Upon hearing

Put out that fire!

I might deduce many things: that I've started a fire, that my host knows about it, and that he will hide the fireworks from me in the future. None of these propositions are part of the *content* of my friend's command. They are inferred from *the fact that the command was given* along with background knowledge about the situation. So too with pains. I'm cutting onions, the knife slips, I feel pain: I readily infer that I've cut myself. This inference is possible (and reasonable) even if the *content* of the pain itself is entirely imperative.

So imperative accounts might account for the first intuition by arguing that patients are inclined to infer false propositions on the basis of phantom pains. This is implausible, though, except in a small minority of cases. Those who suffer from phantom limb pain do not have the auxiliary beliefs required to support such an inference—they are usually quite certain that they *are* missing a limb. That is one of the things that make phantom limb pains so frustrating. So I

doubt that phantom limb sufferers are merely inclined to form false beliefs on the basis of their pain.

Second, one could argue that pains have a mixed content, consisting of both an imperative and a representation of (say) tissue damage. Hall has recently defended this sort of mixed story about pains ([2008] 534). A mixed story accounts for both intuitions: the representational content of pain is the part that can be true or false, and the imperative content is the part that can't. So insofar as there is a problem, it arises only for people like me who want pain to be entirely exhausted by its imperative content.

I have no knockdown argument against a mixed account (and mixed views have other virtues that I won't discuss here). However, a pure imperative account enjoys a certain degree of theoretical economy. If we can show that a pure account is consistent with both intuitions above, then all things considered we ought to prefer it. Further, I think that pressing a pure imperative account reveals how powerful it can be.

So I will argue that a pure imperative account can handle the first intuition. Here's the strategy: Take the phantom pain described at the outset as our model. Its content is the imperative

Don't keep clenching your fist!

Though neither true nor false, this imperative *presupposes* several false propositions: that there is a fist to unclench, for starters, and that it is possible to unclench that fist. These presuppositions are both false for the amputee. Telling this story more precisely will require an account of imperative presupposition, which in turn requires an account of the content of imperatives. I will argue that if we accept a variant of Hamblin's semantics for imperatives, we can give a straightforward story about imperative presupposition that accounts for the first intuition. I close

with some reflections on the imperative theory and the light it casts on the uniquely distracting, frustrating nature of many chronic pains.

2 Imperative Content

Let's begin with a distinction. First, imperatives may be *satisfied* or *unsatisfied*. Satisfaction is plausibly extensional: the command

Bring me a beer!

is satisfied just in case you bring me a beer, and unsatisfied if you don't. Second, imperatives may be *legitimate* or *illegitimate*. You may reasonably protest that I don't have the authority to order you to bring me a beer. If we are in certain formal situations (military ones, say) the legitimacy of orders may even be determined by a precise set of rules. Though the legitimacy of a command may occasionally depend on its content, legitimacy is orthogonal to satisfaction: illegitimate commands might still be satisfied, for example.

An imperative inherits its legitimacy from extrinsic facts about the relationship between the issuer and the addressee, but facts about legitimacy do not seem to be part of the content of imperatives themselves. For one, we might wonder whether a given command is legitimate ("Can the department chair really order me to repaint the department?") without being puzzled about the content of the command itself. For another, we are sometimes forced to make the source of legitimacy explicit when we issue commands ("I'm your father, and I say don't see that boy again!"). Neither of these practices would make sense if facts about legitimacy were part of imperative content.

On the other hand, there seems to be a straightforward sense in which legitimate and illegitimate commands have the same content. The command:

Do this homework!

is legitimate if I issue it to a student, and illegitimate if he issues it to me. We will have issued very similar commands to one another, though. Not quite the same command—my command is satisfied if he does the homework, while his command is satisfied if I do the homework. But the senses in which our commands have similar content and the sense in which they have different content is in both cases mirrored in the satisfaction-conditions of the imperatives.

This strongly suggests that the content of imperatives can be identified with their satisfaction-conditions. Here, I am guided by Hamblin's semantics for imperatives, especially his addressee-action-reduction theory of imperative content (Hamblin [1987] Ch4). The basic idea is simple. Imperative satisfaction is an extensional notion. The imperatives:

Bring me a beer!

Find the bottle opener within the next five minutes!

Make sure the fridge doesn't get empty!

are satisfied just in case I, respectively, bring you a beer, find the bottle opener, and keep the fridge from getting empty. At a first pass, we may identify the content of an imperative i with its satisfaction-conditions, modeled as the set of possible worlds W_i that share the feature enjoined by the imperative. So the content of the first imperative is just the set of possible worlds in which you bring me a beer.

This first pass needs a few refinements. First, imperatives really enjoin *actions*, not states. This is explicit in the first imperative, and implicit in the second and third. I don't really count as satisfying second imperative if I merely stumble over the bottle opener: the imperative tells me to *look* for the opener, not merely to end up finding it. Even apparently 'stative' imperatives like

the third enjoin the addressee to take or avoid actions that would *bring about the state*. Similarly, imperatives not only enjoin me to take (or avoid) certain actions, but also to take any reasonable steps necessary to perform the explicitly enjoined action. If I fail to get you a beer, I cannot excuse myself by noting that I can't reach one from my chair and that you never ordered me to stand up. Most imperatives are also open-ended—they don't demand that I take any *particular* course, so long as the course terminates in the actions explicitly enjoined. So let W_i be the set of worlds in which I do something that leads me to perform the enjoined action.

Second, imperatives are satisfied by particular agents after some particular time. This agent may be implicit or explicit in spoken imperatives. The time must always be after the issuance of the imperative: imperatives are always forward-looking (Hamblin [1987] 81). The time of satisfaction may be in the immediate future (as in the first example above), at or by some definite time in the future (as in the second), or at all points throughout some possibly indefinite future (as in the third). One might also include agents and times in the content of imperatives. Hamblin does so, and doing so might help us deal with puzzling cases where pain appears to be dissociated from motivational force.² The imperative account can treat such pains as special cases where an agent faces a practical difficulty identifying themselves as the agent to which an imperative refers. Such a situation is consistent with the content of pain being exhausted by an imperative, while nevertheless failing to cause appropriate actions. (Compare: I might hear the police shout 'Stop or I'll shoot!'. I may believe that anyone should be impressed by the threat, without realizing that the command is directed towards me).

Both conditions are important; for present purposes we can simply include them as constraints on W_i , rather than spelling them out more explicitly. Intuitively, I do not count as having satisfied the first imperative if I brought you a beer an hour before; I must bring you a new beer, now, to satisfy it. Nor have I satisfied it if someone *else* brings you a beer. So let us assume that W_i is restricted to actions performed by the right person at the right time.

Third, some imperatives rank possible outcomes. The command:

Raise money for Oxfam!

admits of two readings: one on which you are commanded to raise *any* amount of money, another on which the more money you raise the better. Both imperatives would be satisfied in the same worlds: namely, ones where I raise any amount of money for Oxfam. But they are clearly different commands. This is because the second *ranks* W_i -worlds: the ones where I raise more money are more preferable.

Imperatives can also rank worlds in which they fail to be satisfied. The sergeant orders the private to peel a truckload of potatoes, knowing that success is unlikely. But implicit in his order is a ranking of worlds in which the private fails: the ones in which he tries harder are better.

So a final refinement: In addition to the set W_i , let i include a utility function u defined over the space of possible worlds. The function u should be complete and transitive, and should in addition rank no $w \notin W_i$ more preferable than any $w \in W_i$. One might worry that some ways of falling short of satisfaction are actually preferable to proper satisfaction. (“You told me to fix it!” — “I didn’t know the repairs would cost a thousand dollars; I’d rather you not have bothered.”) But it seems to me that these cases can be handled without too much strain simply by noting that the implied satisfaction-conditions are often more complex than the surface grammar of spoken commands might appear to indicate. Finally, I will assume that u is an ordinal function, but a full treatment might require it to be a cardinal function in order to capture differences in intensity between different pains.⁴

3 Presupposition and Pain

We can thus treat the content of an imperative i as an ordered pair $\langle W_i, u \rangle$ satisfying the conditions set out above. A *presupposition* of i is any proposition that is true in each $w \in W_i$.⁵ If I

order you to get me a beer from the fridge, I presuppose that there is beer in the fridge: every world in which you get me a beer is one in which there are beers to be gotten. Similarly, if I tell you to keep the fridge from going empty, I suppose that you can enforce restraint, *or* find more beer if necessary, *or* whatever: every world in which we don't run dry is a world in which at least one of these disjuncts comes to pass.

Every imperative presupposes some specific things about the world. But all nontrivial imperatives also share a structurally similar presupposition, to wit, *that they can be satisfied*. Since W_i is defined as the set of worlds in which i is actually satisfied, the proposition that i can be satisfied must be true in each W_i -world. This means that every imperative *presupposes* that it can be satisfied. Call the implication that i can be satisfied the *basic presupposition* of any imperative.

Phantom pains presuppose something false about the sufferer's body. A cramping pain tells me not to clench my hand. Every world in which that imperative is satisfied is one in which I do something with my hand aside from clenching it. So the imperative presupposes that I *have* a hand. That is false in the case of phantom hands. So the pain of phantom limbs presupposes something false, and is in that sense misleading.

Here a potential problem arises. On my account, pains are proscriptions—analogueous to cease-and-desist orders. Shouldn't negative imperatives be trivially satisfied in the case of phantom pains? (After all, you can't *but* avoid doing something with a hand you don't have.) If so, my story is in trouble: phantom pains would not presuppose that the sufferer has a hand, because he fails to have a hand in some worlds in W_i .

But is it obvious that proscriptions against φ -ing are satisfied in all worlds in which φ cannot be done? I think not. Consider the following pair:

Don't feed the bear!

Stop feeding the bear!

If I haven't fed the bear and have no intention of doing so, then the former is easily satisfied; at best it enjoins me to be vigilant enough to keep from falling into the cage. Intuitively, though, the second imperative can only be satisfied if I have been feeding the bear and give it up: the worlds in which it is satisfied are ones where I have been feeding the bear before time t , and give it up after t as a result of the command. If I haven't been feeding the bear, the imperative presupposes something false, and I rightly protest the command for that reason.

Here there is a parallel with questions. Questions also have presuppositions, and are correctly *rejected* if these presuppositions are false (van Fraassen [1980] Ch5). Consider the pair:

Did Lovejoy set any fires?

Did Lovejoy stop setting fires?

If Lovejoy hadn't set any fires yet, the first question is still intelligible and answerable. The second question, however, must be rejected, not answered: it presupposes that Lovejoy has set at least one fire, which is false.

A similar distinction can be made for imperatives. Call negative imperatives that are trivially satisfied if the state they specify does not obtain (i.e. 'Don't feed the bear') *state-neutral* imperatives, and the other sort (i.e. 'Stop feeding the bear!') *state-presupposing* imperatives.⁶

Pains, especially those with pressing, immediate import, are of the state-presupposing type. For one, the commands of pains seem to be of the simple sort ("Stop clenching!") rather than state-neutral hypotheticals ("If you have a hand, stop clenching it!"). For another, pains often show up in the context of ongoing action, and their import is to guide our behavior given

that context. Given this context, they affect action by ranking some possible outcomes higher than others. In the case of hand cramps, the preferred outcomes are those in which one does something with the hand other than clench it. But that presupposes that there are things to do with the hand aside from clench it, which in turn presupposes that there is a hand with which to do something. So the negative imperatives that constitute phantom limb pains presuppose that there is a limb. That presupposition is false, and in that sense the phantom pain has gone wrong.

Phantom pains go wrong in a second way. First, note that many imperatives are actually unsatisfiable—for example, because of simple lack of ability on the part of the addressee. You order me to lift that bus above my head. I can't. Nor can any of my close counterparts, no matter how hard they try. So the imperative is actually unsatisfiable. This means that the basic presupposition—that one can satisfy the imperative—is false.

Phantom pains also violate the basic presupposition. The imperative that constitutes the phantom pain presupposes that the patient has the ability to unclench his hand. The patient has no hand; *a fortiori*, he cannot unclench it. So the basic presupposition is also false. Phantom pains thus mislead in a second sense: they present *commands that can never be satisfied*.

4 Unsatisfiable Imperatives and Chronic Pain

Return to the intuition that phantom pains are misleading. A pure imperative account can point to at least two falsehoods presupposed by phantom pains. The first—that the sufferer has a hand—parallels the nonveridicality that the representationalist attributes to phantom pain. In this sense imperative and representationalist account give a similar story, though of course deriving from different considerations.

The violation of the basic presupposition, on the other hand, has no parallel on a standard representationalist story. That is unfortunate. It seems to me that unsatisfiable commands are a

common thread in many chronic pain syndromes: the paralyzed leg cannot be moved to protect it; the hyperalgesic can never favor the affected limb enough. This sheds important light on the negative psychological effects of chronic pain, and I want to conclude by sketching some of those consequences.

The notion of an unsatisfied basic presupposition may invite comparison with the oft-invoked deontic principle that ought implies can. But there is an important difference between the two. If you have no hand, then “You ought to unclench your hand” is false. If you know you have no hand, then this false claim shouldn’t move you. In general, impossible ought-statements shouldn’t enter into our practical deliberations.

Not so with unsatisfiable imperatives. An unsatisfiable imperative may still be legitimate: that is, it may issue from a recognized authority and enter into practical deliberations in the same way as satisfiable imperatives. This is commonplace when the satisfiability of an imperative is questionable (the CEO has ordered that we build a cheaper widget. That may not be possible, but the imperative should motivate us to try). But unsatisfiable imperatives can be deliberately issued with full knowledge of their unsatisfiability. The unlucky private is ordered to peel a truckload of potatoes. The sergeant knows that he cannot; he issued the order as punishment, and precisely *because* it cannot be satisfied.

The difference between ought-statements and imperatives is mirrored in the way they enter into our practical deliberations. Imperatives rank worlds. To accept an imperative, I propose, is to let its utility function alter your effective appraisal of utilities. I want to go home, and value worlds where I am home more highly than those where I remain at work. The department chair orders attendance at a meeting. Acceptance of that imperative should temporarily change my preferences: I now give higher weight to worlds where I stay for the meeting. All things being equal, that changed utility function will change my actions, just as the chair intended.

This change in my preferences is not a change in my desires: I still want to go home. The change in my preferences is not absolute: I might accept the imperative but have it overridden by other, stronger reasons. Most importantly, this change is not the result of practical deliberation: upon being ordered to a meeting, my preferences simply change without deliberation on my part.⁷ (Of course, I might deliberate on the consequences of skipping the meeting, the likely reaction of the chair, and so on. But in that case, I have ceased to accept the imperative as a command; I'm deliberating based on the fact that the imperative has been issued. That is a different matter altogether.) In this sense, imperatives contrast with the issuance of ought-statements; at a minimum, I have to decide whether the statement 'You should come to the meeting' is true. The effect of imperatives is more direct than that.

Imperatives do not make us automata, of course. All but trivially satisfiable imperatives will provoke deliberation, because a change in one's effective utility function typically requires an adjustment to one's course of action. In many cases, we try hard to satisfy a new imperative *and* do what we would otherwise do.

That said, the practical effect of ordinary, conversational imperatives is to link your utility function with that of another, and results in you doing what they would prefer to happen. Indeed, we sometimes speak of one person *acting through* another by issuing commands to them, suggesting that the addressee's activity reflects something relevant about the issuer of a command.

Return to pains. Phantom pains are unsatisfiable imperatives, as are many other chronic pains. This is, I claim, one source of the negative psychological states that so often accompany chronic pain syndromes. To accept a source of imperatives as legitimate is to be ready to treat some class of imperatives issued by that source as legitimate. This usually means a commitment to accept them *regardless* of whether they are satisfiable or fit with your standing desires. But accepting an

unsatisfiable imperative results in a variety of negative psychological states. Many of these are precisely the states we find associated with chronic pains.

First, unsatisfiable imperatives are *frustrating*. Ex hypothesi, there's nothing you can do about them—but as accepted imperatives, they nevertheless affect what you think you should be doing. An unsatisfiable imperative thus brings with it a constant, palpable sense of failure. This sense of frustration is often associated with chronic pains. The lack of a hand doesn't keep amputees from trying (willing, pleading) to unclench the cramped hand, or from being frustrated at their failure.

Second, unsatisfiable imperatives are *distracting*. As I noted above, it is natural to try to figure out a course of action that satisfies both our imperative commitments and our other desires. This means that any forceful imperative that is at odds with our own desires will demand cognitive resources. So too with chronic pains: they present a problem (how to act in a way consistent with them) that has no obvious solution. The cognitive resources used up in fruitless attempts to solve that problem are resources that could be used to solve other problems. Chris Mole has argued that attention to a task involves cognitive unison with respect to that task [2011]. If so, then chronic pains will hinder our ability to attend to things besides our bodies, precisely because they present an urgent and unsatisfiable practical puzzle.

Third, unsatisfiable imperatives are *demoralizing*. Since imperatives have a direct effect on one's preferences, there is a sense in which one is destined to fall short *by one's own lights*. (This is, I suspect, one reason why unsatisfiable imperatives are used in punishment: the person who accepts them is thereby forced to evaluate himself in the same negative light as others evaluate him.) Constant frustration and distraction naturally leads to a feeling of loss of control and consequently to depression and anxiety. Again, demoralization, depression, and anxiety are common features of those in chronic pain.

Finally, unsatisfiable imperatives can be *life-altering*. Unsatisfiable imperatives result in an effective utility function that is at odds with an agent's actual desires. Reasonable agents should find this situation unacceptable and seek to change it. In the case of ordinary imperatives, we can resolve standing conflicts in a number of ways. We might change what we want. But we might also downplay the role of the imperatives in our deliberations, at the limit ceasing to accept them entirely from a particular source. The beleaguered private can always become incorrigibly insubordinate, or even defect. That may be undesirable for other reasons, but will resolve the practical conflict.

When it comes to pain, however, the option of ignoring the imperative becomes unavailable. The authority of the body is inviolate. Save perhaps for some stoics and saints, we can't stop taking pains seriously. Rightly so: even those in chronic pain are still protected against damage by their other pains. So in the case of chronic pains the only solution is to change one's desires—to cease to *want* to do things that might cause flare-ups of pain, to avoid situations that, although not harmful, the body proscribes as forbidden. No one is surprised that pains make us act differently. Nor should it be surprising that pains can make us want to act differently—we learn from pains all the time. But chronic pains can make their sufferers want to act differently *with no good reason*. This the final way in which phantom pains (and other chronic pains) convey something false. Those who suffer them can become convinced, over time, that their desires should change—that they should avoid venturing into the outside world, for example. That change is usually for the worse—it is a change that the agent would not accept if pain-free. This is, in effect, an attack on the *agency* of the sufferer, and normatively bad for that reason.⁸

The imperative account of pain thus sheds light on many of the puzzling aspects of phantom limb pain. It can accommodate the representationalist intuition that phantom pains mislead the amputee in some way about the missing limb. By looking at imperative presupposition, we also find something that the representationalist might overlook: the false presupposition that the

amputee can do something about his pain. The falsity of the basic presupposition in turn shows reasons why intractable pain might present a problem for the agency of those who suffer from it.⁹

¹ See my [2007] and [2010]. Richard Hall [2008] and Manolo Martínez [2010] have also independently argued for a imperative view of pains and other bodily sensations. See also A.D. Craig [2003] for a similar view, though not couched in terms of imperatives.

² I suggest something along these lines in my [2007]. Nikolai Grahek has brought a stronger case to philosophical attention, that of pain asymbolia. Asymbolics feel painful stimuli and judge them to be painful, but appear to be entirely unmotivated to act on them. Grahek has argued that pain asymbolia is a clear case---and perhaps the only pure case---of pain stripped of motivational import [2007]. If so, this would appear to be a counterexample to versions of the imperative theory which, like mine, claim that pain is exhausted by imperative content. Grahek's characterization of asymbolia is problematic for two reasons. First, asymbolics don't just fail to react to painful stimuli. They also fail to react to nearly all bodily threats: being threatened with a hammer, knife, or needle, to shrill whistles and burning magnesium wires, to verbal menaces, and to oncoming trucks ([Schilder and Stengel, 1928], [Hemphill and Stengel 1940], [Berthier et al. 1988]). Second, if asymbolics merely lacked the immediate affective import of pain, one would still expect them to avoid damaging situations via simple practical reasoning: this damages my body, I care about my body, and therefore I should avoid it. This is in fact the case with the congenitally insensitive to pain, who lack pain sensations and so *a fortiori* lack the proposed separable affective dimension of pain. Asymbolics do not avoid damage, however, which is one of the striking and dangerous features of the syndrome. It therefore seems more likely to me that pain asymbolia is a complex depersonalization syndrome, one in which sufferers cease to recognize their bodies as a locus of potential concern (Geschwind [1965] 269-72; Sierra and Berrios [1998]). The suggestion in the main text is an attempt to spell out what depersonalization might mean in the context of imperatives. That argument in turn raises tricky questions about the phenomenal unity of consciousness, which I address further in work in progress.

⁴ Adam Pautz (in conversation) and Tye and Cutter [forthcoming] have recently argued that the imperative theory cannot account for differences in intensity of pains. Ordinary language makes a rough distinction between the force of different imperatives, however, and it is hardly a stretch to suppose that phenomenological imperatives might make a more fine-grained distinction. In that sense, the proposal is exactly parallel to that of most representationalist accounts of ordinary sensations, on which the internal representations of objective magnitudes must outstrip the resources of everyday language in order to account for fine variations in phenomenological content.

⁵ This has the apparently counterintuitive consequence that any imperative presupposes all necessary truths. This is a useful feature, however, when it comes to analyzing presupposition failure. If I order you to produce the largest prime number, for example, my imperative fails due to conflict with the necessary laws of mathematics.

⁶ This would require another departure from a Hamblin-style semantics. Hamblin presupposes that there are basic actions that are not defined in terms of their relationship to other actions or states. So either the satisfaction-conditions must include stretches of world before the time of issuance (the present suggestion) or else the relevant concept of action must be broadened to include non-basic actions (in which case 'stop X' enjoins a non-basic action that you can only perform if you were doing X).

⁷ Note that the question of how my preferences change is distinct from the question of whether I have a reason for my preferences to change. I intend the present account to be neutral on the latter question (and so potentially compatible, for example, with the account Korsgaard gives in Lecture 4 of her [1996].

⁸ David Sussman offers a similar argument in his [2005], developed at greater length to focus on some of the additional harms unique to torture.

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