

Handout 1: Belief Chapter 1

1. The Pragmatic Definition of “belief”

Preparedness to act upon what we affirm is admitted on all hands to be the sole, the genuine, the unmistakable criterion of belief. (Bain, 1888, 505)

The test of belief is willingness to act. (James, 1896/1912, 90)

The Folk Psychological Definition: To believe something at a given time is to be so disposed that you would use that information to guide those relatively attentive and self-controlled activities you might engage in at that time, whether these activities involve bodily movement or not.

The Scientific Definition: beliefs are those neural states or structures that encode the information that is primed to shape our relatively attentive and self-controlled actions, where, again, “actions” should be understood to include purely mental achievements like drawing a conclusion or imagining a scenario.

Interpreting these definitions: “belief” marks a threshold with regard to your use of information—a threshold imposed on a pair of quantifiable psychological phenomena: attention and control.

The Assimilation of Information

Minimal Assimilation Defined: If you bring a given body of information to bear when paying full attention to the activity you’re engaged in, we can say that you have at least minimally assimilated the information that guides you in that endeavor. Similarly, information is minimally assimilated when you bring it to bear when exercising complete control over the movement of your limbs through space or the progression of your thoughts over time.

Maximal Assimilation: if you act or reason on that same information when your attention is fully diverted to other things (or is as diverted to other things as is compatible with your successfully acting or reasoning as you do), we can say that the information in question is maximally assimilated. Something similar is true if you bring that information to bear when exercising minimal control over your thoughts or movements, or as little control over your thoughts or movements as is compatible with your acting or reasoning as you are.

The Pragmatic Definition of Belief Restated: Beliefs are representations that are *minimally* assimilated within your mind, brain or nervous system. Note that degree of assimilation is *inversely* correlated with guidance by belief. The idea here is that focusing attention and exercising control are the means by which you bring your beliefs

to bear on an activity. Insofar as the more fully assimilated information guiding your performance of an action does not accord with these beliefs, that information may be something you do not accept.

An Initial Example: Answering questions about your residence shortly after a move with maximal distractions in contrast with no distractions at all.

Distinguish acting *in accord* with your beliefs from acting *from* those beliefs.

Question: Do you have the intuitions appealed to in this example and similar examples from the literature on “alief”?

2. A Pragmatic Taxonomy of the Mind

Bain’s traditional taxonomy divides the mind’s functions into three: feeling, will and intellect (Bain, 1859/1865). And though Bain classified belief under the category of will rather than intellect or feeling, and therein inaugurated a pragmatic revolution in the philosophy of mind, he did not conceive of the will as a “simple” faculty or phenomenon. Instead, Bain devoted thirteen chapters to the will’s components and operations—thirteen chapters on the science of his day that he interpreted with the aid of common sense and careful reflection.

3. Irremediable Vagueness in Applications of the Pragmatic Definition

Since (a) control and attention are themselves heterogeneous at both cognitive and neural levels of description, (b) control and attention can come apart from one another (to some degree) and (c) both control and attention admit of degree, application of the Pragmatic definition of belief to particular instances often requires a great deal of judgment. We can call these “borderline cases.” (Note that maximal assimilation and minimal assimilation are the endpoints in terms of which this borderline region is characterized.)

An Initial Example of Control without Attention: Jeannerod’s experiments.

Diagnosis: you can exert a certain degree of control over your movements while your attention is largely diverted from them. And when your attention is largely diverted away from your actions in this way, you will lack the self-awareness necessary for an accurate verbal report of what you are doing. **Action** of any complexity requires **the coordination of perception with responsive movement**, not the undifferentiated “conscious willing” of a predetermined goal.

4. Against “Will Skepticism”

The Habitual, or routine actions, which make up the acquired ability and skill of men and animals...are performed almost unconsciously; that is to say, the more thoroughly they attain the character of routine, or habit, the less is the feeling that attends their exercise. Such actions as walking, turning a wheel, stitching, may be sustained without giving rise

to any but a feeble conscious impression, so as to leave the mind free for other exercises or emotions. (Bain, 1859/1865)

James goes on in a similar vein, quoting G.H. Schneider with approval,

Knitting appears altogether mechanical, and the knitter keeps up her knitting even while she reads or is engaged in lively talk. But if we ask her how this be possible, she will hardly reply that the knitting goes on of itself. She will rather say that she has a feeling of it, that she feels in her hands that she knits and how she must knit, and that therefore the movements of knitting are called forth and regulated by the sensations associated therewithal, even when the attention is called away. (James, 1890/1950, 119)

If the careful direction of consciousness were necessary to its accomplishment on each occasion, it is evident that the whole activity of a lifetime might be confined to one or two deeds. (James, 1890/1950, 114)

In our first attempts to write, to cipher, to play on an instrument, to speak, or in any other work of mechanical skill,—the inward sense of labor and difficulty is corresponded to by the number of awkward and irrelevant gesticulations. On the other hand, in the last stage of consummated facility and routine, the consciousness is almost nothing; and the general quietude of the body demonstrates that the course of power has now become narrowed to the one channel necessary for the exact movements required. (Bain, 1873, 56)

The routine operations sustained by mere contiguity evolve no feeling; the more perfect the intellectual habits, the less consciousness is associated with them. A practiced accountant approaches to a calculating machine. (Bain, 1859/1865, 38)

Conclusion: Bain's account of belief anticipates contemporary cognitive neuroscience in emphasizing the priority of movement to both self-awareness and self-control. But Bain defends his assertion of this priority thesis with common observations of human infants and other animals (1888, 321-30). Our children are born sucking and swallowing. But it takes time for them to focus their attention on nursing so as to exercise greater control over the process. Is it surprising that infants move their lips, tongues and jaws before they are aware of doing so? Is it surprising that their movements prefigure the kind of self-awareness they utilize to develop more sophisticated forms of consumption? Observant parents began to report on this developmental trajectory long before the advent of cognitive neuroscience. Cognitive neuroscience hasn't overturned our common understanding of the relationship between self-awareness and self-control; it has deepened it.

5. Belief in Action

The pragmatists claim that your beliefs are "brought to bear" on both your more controlled, attentive transitions in thought and your more controlled, attentive movements through space, even as your transitions in thought respond to your movements through space, and your movements through space respond to your transitions in thought. So it is

at best misleading to speak of a person's beliefs and desires "causing" her decisions, which are then supposed to generate those intentions that sculpt her movements. You don't experience physical paralysis when deliberating, and then unconsciousness when moving, and then physical paralysis when evaluating how your movements are progressing, and then unconsciousness when adapting your trajectory to this self-critique. Instead, action is typically an amalgam of movement, perception of self and environment, ingrained response to these stimuli, calculation of means and ends, varied concentration on both process and interim result, somatic feelings, mood, background concern, a desire for something better, satisfaction with what is, or some unstable vacillation between the two. Everything happens at the same time. And belief is intertwined with it all.

An Initial Example: Bicycling instinct, crawling, walking, running, sprinting, etc.

One Initial Lesson: Beliefs can guide your movements in the absence of any propositional frame. You can draw directly on perception memory and expectation in the service of motion.

Caveat: When one component of a skill is routinized, we no longer need to employ our beliefs to guide that component (Dickinson 1985, 1989). When an agent has fully assimilated a body of information, it will directly shape her reactive thinking and movement without the need for the attentive, controlled application of information to action that we pragmatists equate with guidance by belief. But an agent's beliefs are not then irrelevant to an explanation of her actions. Instead, if her behavior has any complexity to it, she will bring her beliefs to bear on distinct, non-routinized components of the activity in which she is engaged and her efforts to coordinate these components with various "subroutines" guided by bodies of information she has more fully assimilated. Because of this, "Automaticity is a concept best applied to components of complex behaviors rather than to behaviors as a whole" (Jonides et al., 1985)

6. Diagnosing Dissociations

Locked in Syndrome and a hypothetical agent with Locked-Out Syndrome

Question: Is the Pragmatist right in thinking that a Locked-Out agent has beliefs? Note that this would be denied by Descartes and the Cartesian scholastics.

Further questions: How would we diagnosis physical actions predicated on a piece of information when an assumption of that information is not at all incorporated into reasoning or thought? How would we diagnosis the converse of this?

7. The Self and Self-Control

Question: Is motor control a form of self-control?

The proper meaning of self can be nothing more than my corporeal existence, coupled with my sensations, thoughts, emotions, and volitions, supposing the classification

exhaustive, and the sum of these in the past, present and future. Everything of the nature of a moving power belonging to this totality is a part of self. The action of the lungs, the movement of the heart, are self-determined; and when I go to the fire to get warm, lie down under fatigue, ascend a height for the sake of a prospect, the actions are as much self-determined as it is possible for actions to be. (Bain, 1859/1865, 509)

Motor control is a form of self-control that many non-human animals possess, even those who cannot suspend judgment on an issue, or ignore temptation to make good on a promise, or adopt a “persona” in order to be seen by others as they want to be seen.

The control of feelings generally is among the hardest of our voluntary acquisitions; and although in education it ought to be commenced as soon as at all practicable, we must not reckon it among the first or most elementary. (Bain, 1859/1865, 330)

It would be wrong to say that young children—and those animals who cannot delay gratification of their appetites—are entirely incapable of controlling themselves, and it would be similarly wrong to say they lack all capacity for self-control, for this would mark a pernicious tightening of the expression’s usage: pernicious in its encouraging the efforts of those who seek to distance adult humans from children and other animals

Meta-Level Question: Is it ok to use these kinds of pragmatic consideration to argue for a certain psychological taxonomy or theory of mind?

8. Meta-Level Pragmatism

I defend an affirmative answer to this question in chapter 5. So the book has two pragmatic theses. The first is Bain’s definition of belief. The second is a meta-level pragmatism.

Meta-Level Pragmatism: The nature of belief cannot be determined by scientific theorizing alone, but must be relativized to a set of theoretically underdetermined taxonomic choices. Though we must consult the results of various sciences to arrive at a satisfactory theory, our questions about the nature of belief are not wholly scientific.