

Lecture 6: “The Fixation of Belief”

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1 *Précis*

This lecture treats “The Fixation of Belief” (1992), the first of a series of 6 essays collectively entitled “Illustrations of the Logic of Science”. Its stated goal (p. 121): “To describe the method of scientific investigation” as a method of “fixing belief”, and to compare it with other methods of doing so.

Driving questions:

1. What is thought in general?
2. What is belief in particular?
3. What are the mechanisms or processes that eventuate in belief (“fix belief”)?
4. Which, if any, of those mechanisms or processes is reliable, and, if more than one is, which are the most reliable?

Synoptic introductory remarks and questions on the questions:

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1. What reason is there to suspect that there is such a thing as *the* “method of scientific investigation”? Must there be only 1? What he says about advances in science constituting advances in logic suggests that, even if there be only one method of scientific inquiry, it is not necessarily a static fixed thing, but evolves over time
2. Why should the aim of science be “to fix belief”?
3. What is to count as “science”, and how are we to identify its method? (In what way was Roger Bacon “almost”—but still not—a “scientific man”?)
4. What is the notion of “experience” that plays a central and fundamental role?
5. What is the criterion of the “validity” of reasoning?
6. Note the characteristically broad conception of “logic” (p. 111):
 - a. “a mind well furnished with the weapons of modern logic” would have tried a *particular form of mathematical curve*—is substantive knowledge of geometry and its fruitful employment part of logic?
 - b. “each chief step in science has been a lesson in logic”
 - c.

The Darwinian controversy is, in large part, a question of logic. . . . Whether or not existing animal forms are due to such action [*viz.*, natural selection], or what position the theory ought to take, forms the subject of a discussion in which questions of fact and questions of logic are curiously interlaced.

Outline:

§I historical and motivational remarks

1. reasoning is not a skill we possess by nature, but we are naturally suited to learn it
2. advances in science are part and parcel of advances in logic

§II the nature of reasoning

1. the object of reasoning: to come to know something new
2. the validity of good reasoning: independent of our mental processes
3. the mental process of reasoning determined by habit, formulated in guiding principles, which represent the relevant facts in virtue of which reasoning is valid

§III the phenomenal, architectonic and procedural differences between doubt and belief

§IV the irritation of doubt drives inquiry, until we are soothed by the removal of the irritant, culminating in inquiry’s end, *viz.*, belief—which is inquiry’s only goal

§V the 4 methods of fixing belief, their progression from the meanest, least useful, least socially oriented and least truth-conducive to the most sophisticated, most productive, most socially oriented and most truth-conducive

2 The Object and Validity of Reasoning

1. pp. 111–112

The object of reasoning is to find out, from the consideration of what we already know, something else which we do not know. Consequently, reasoning is good if it be such as to give a true conclusion from true premises, and not otherwise. Thus, the question of its validity is purely one of fact and not of thinking. A being the premises and B the conclusion, the question is, whether these facts are really so related that if A is B is. If so, the inference is valid; if not, not. . . . It is true that we do generally reason correctly by nature. But that is an accident.

- a. the *validity* of reasoning is determined by its goal (most abstractly characterized)—the derivation of truth-tables, as it were, from the ends one can have in reasoning
- b. note the strong anti-psychologism
- c. I suspect the “accident” of our reasoning correctly in general is so in 2 ways: an “accident” in the sense that how we come to be so constructed, if one accepts Darwin, was the result of a stochastic process; and an “accident” in the medieval sense, that our reasoning correctly in general is not of the essence of what makes reasoning good nor of what makes life good, but rather an accoutrement of both (in which regard, compare the subsequent remarks on the refractory character of our sangunity and hopefulness)—the correctness of our reasoning is a feature of it *per accidens*, not *per se*
- d. the way he phrases it suggests he has only simple deduction, or *modus ponens*, in mind; but, as we will see in subsequent essays, in fact this formulation is general enough to cover all 3 types of reasoning he argues are fundamental (*viz.*, deduction, induction and abduction)

2. now compare (p. 112):

That which determines us, from given premises, to draw one inference rather than another, is some habit of mind. . . . The habit is good or otherwise, according as it produces true conclusions from true premises or not; and an inference is regarded as valid or not, without reference to the truth or falsity of its conclusion specially, but according as the habit which determines it is such as to produce true conclusions in general or not.

- a. the distinction between a “good habit” and a “valid inference”:
 - i. the former (good habit) is something like a general schema for producing individual inferences that are truth-preserving—but, we will see immediately below, one must take care with this idea, as it may be somewhat misleading, for habits are not propositional (or sentential) in nature, but rather are patterns of thought that get activated in the form of a mental process such as to conduce to the production of mental states with propositional content

- ii. the latter (valid inference), then, is something like an instance of the former, though, again, take care with this simile—the activation of the habit in the form of a mental process *produces* the inference, which *is* propositional, and so strictly speaking cannot be an “instance” of a (non-propositional) habit
 - iii. no reference to the truth or falsity of the conclusion is made for the latter, because that depends on the truth of the premises, which, strictly speaking, is not judged by the habit—nothing stops the habit from being induced to act on false premises (*e.g.*, when they are not known to be false)—it is the *form* of the inference to which validity accrues
- b. *prima facie*, this characterization of “valid inference” does not seem the same as the first (quoted and discussed above)
 - i. before, the “question” of validity was “purely one of fact and not of thinking”
 - ii. here, validity seems to depend on whether the inference instantiates a *mental* habit, *i.e.*, conforms to a way or pattern of thinking
 - iii. I believe the tension (or apparent contradiction) is illusory: as the discussion of “guiding principles” shows, the goodness of a habit is itself grounded in matters of fact; so let’s look at those principles

3. p. 112:

The particular habit of mind which governs this or that inference may be formulated in a proposition whose truth depends on the validity of the inferences which the habit determines; and such a formula is called a *guiding principle* of inference.

- a. the habit itself is not the guiding principle, but rather a proposition formulated to capture or encode or embody it
- b. its truth is determined by the validity of the inferences produced by the associated habit¹—but that validity itself depends on the goodness of the habit! so it seems we’re trapped in a circle here
- c. as intimated just above, as with the resolution for the apparent tension I noted between the two characterizations of validity, I believe the way that habits and inferences (and so guiding principles) are grounded in fact breaks the circle
- d. for guiding principles *are* facts; indeed (p. 113), “almost any fact may serve as a guiding principle”!
- e. in sum, then:
 - i. an inference is the production of a conclusion from premises, as determined by a habit
 - ii. such a habit may be “formulated in” a proposition (a guiding principle)
 - iii. the fact grounds the habit, ensuring its goodness, *viz.*, its tendency to produce true conclusions

¹Or does it merely *depend on* that validity, not wholly determined by it? I suspect Peirce is just being sloppy here, and really means “determines”.

- iv. the fact thus licenses the inference, ensuring its validity by having been produced by a good habit
- v. the fact thus is what makes the guiding principle true
- f. **PROBLEM:** Peirce *never explicitly defines “belief”*!!!² it seems difficult not to infer that belief is the action-guiding habit—that makes good sense of the text—but he never just comes out and says it, and there are, strictly speaking, other ways to construe belief that still make sense of the text, though more strain may be required. He does say, for instance (§III, p. 114):

The feeling of believing is a more or less sure indication of there being established in our nature some habit which will determine our actions.

but that does not define belief to be the habit, but rather only sets up an association between the feeling of a belief and the presence of a habit. The same holds for other similarly slippery statements in §§III–IV. We shall assume that belief is the guiding habit.

- g. **PROBLEM:** it is not entirely clear how the fact represented by the guiding principle is to license the relevant family of inferences
 - i. is that licensing itself an inference, threatening the analysis with a vicious regress? (compare Lewis Carroll’s paradoxical regress of *modus ponens*) if it’s not an inference, then what is it? another habit? would that not also involve a regress?
 - ii. is the idea that all guiding principles are universally quantified statements (like the copper example), and so predicate calculus is supposed to ride to our rescue? surely not, since “almost any fact may serve as a guiding principle”

Miscellany:

1. some guiding principles are “absolutely essential” , *viz.* those “which are necessarily taken for granted in asking whether a certain conclusion follows from certain premises” (p. 113)
 - a. it sounds as though he is talking about purely logical principles such as “universal instantiation” in the quantified predicate calculus
 - b. it is not clear whether or not his example supports this reading: the existence of such mental states as doubt and belief, along with the possibility of passing from one to the other while maintaining the object of thought in such a way as to be guided by universal rules
 - c. “As these are facts which we must already know before we can have any clear conception of reasoning at all, it cannot be supposed to be any longer of much interest to inquire into their truth or falsity.” — perhaps a transcendental deduction of their validity? or merely that the impossibility of doubting them implies the absence of that urgent spark that drives us to cogitation (as his subsequent analysis of the fixation of belief would have it)? or do these two come to the same thing?

²Hint: DON’T DO THIS IN YOUR TERM PAPER.

2. several remarks *prima facie* suggest an understanding of the objectivity of reasoning and its conclusions friendly to realism:

- a. p. 110, on the superiority of Kepler’s method—which, note, includes Kepler’s objective, the end he had in view:

the thing to be done... to improve astronomy: that [scientists] were not to content themselves with inquiring whether one system of epicycles was better than another, but that they were to sit down to the figures and find out what the curve, in truth, was.

- b. p. 111, on the relation between premise and conclusion of a good inference:

[T]he true conclusion would remain true if we had no impulse to accept it and the false one would remain false, though we could not resist the tendency to believe in it.

3 Doubt, Belief, Inquiry

1. belief and doubt are distinguished in 3 ways (p. 114):
 - a. the “raw feel” of each
 - b. beliefs “guide our desires and shape our actions”; doubt does not; this guidance and shaping takes the form of a habit that “determines our actions”—is this the same type of habit that determines inferences?
 - c. we struggle to free ourselves from the unease and dissatisfaction of doubt, but cling tenaciously to the calmness and satisfaction of belief³
2. belief is a disposition to act in certain ways under certain conditions, but doubt urges us to act immediately; compare Ramsey’s dictum (paraphrased, I don’t remember the original exactly): “beliefs are maps by which we steer”⁴
3. both are of the same character as (“remind us of”) brute nervous activity—but what the hell does that mean? What is their *actual relation* to nervous activity? Peirce does not say.
4. inquiry is the struggle to remove doubt and attain belief—Peirce implies that this is not always to be understood as a principled or reasoned or rational process; nonetheless, not *every* removal of doubt will, presumably, count as the fixing of a belief—I sometimes (say) may simply have been distracted by a loud explosion with the result that the irritant of doubt disappears as I focus on something more urgent; since this (presumably) does not settle in us a habit (but it rather eventuates in an action guided by a previously settled habit—“a big-ass explosion is something to be investigated”), it is not the fixing of a belief

5. the “settlement of opinion”—*viz.*, the fixation of belief—is the *only* goal of inquiry

³Compare Pyrrhonian skepticism’s goal of *ataraxia*, picked up, modified and championed by Epicurus and the Stoics.

⁴Ramsey was strongly influenced by Peirce. See, *e.g.*, Misak (2016).

6. but what about learning the truth?!

The most that can be maintained is, that we seek for a belief that we shall think to be true. But we think each one of our beliefs to be true, and, indeed, it is mere tautology to say so.

(Compare Moore’s Paradox.) Whither scientific inquiry? What about the goodness and validity of reasoning being grounded in fact? What would Peirce say to Putnam’s brain in a vat?

7. immediate consequences of this proposition:

- a. Descartes was, at best, disingenuous (“Carthago delenda est”)
 - b. an inquiry with a completely satisfactory result need have premises that are only such as to be free from all doubt, not indubitable in any deeper or more profound (“meta-physical”) way
8. strictly speaking, it is possible to continue to argue a point even after doubt has ceased, but such mental activity can have no *purpose*—the seeds of pragmatism, that truth is intimately and inextricably interwoven with purposive and successful patterns of human activity guided by experience and confirmed by experiment

4 The 4 Methods (§v)

The progression from worst to best—compare the stages and evolution of the types of city and soul in Plato’s *Republic*; there, the goal was to show that the philosophical soul had the best life, both intrinsically and extrinsically, with all subsequent types having worse and worse lives until one reaches the tyrant, who has the worst possible life; here, Peirce is arguing that the quality of one’s methods of inquiry increases the closer it comes to that of the scientific man—and Peirce’s incipient pragmatism implies that that good inquiry leads to good life; and, just as the perfectly just man in anything but the best city will suffer grave misfortunes visited upon him by worse men, because of is justice, so will the scientific man suffer from those who follow baser methods of inquiry.

I don’t know whether Peirce had the *Republic* explicitly in mind when writing this, but the similarities are striking, down to the way that transitions are made between the methods of inquiry, the flaws of the previous leading more or less naturally to the next, and it is fruitful to compare the two.

The following outline is complicated by the fact that Peirce (again!) does not provide clear, canonical definitions of each of the methods, rather characterizing them implicitly and indirectly by sketching genesis, exhibiting examples and discussing consequences. DO NOT DO THIS IN YOUR TERM PAPER.

tenacity believe what you fancy, praise anything that supports it, castigate anything contrary and hurl calumny on it

1. one expects the method to arise as a consequence of the following facts (pp. 115–116):

- a. “settlement of opinion is the sole object of inquiry”
- b. “belief is of the nature of a habit”
- c. implicit assumptions: humans are generally speaking (by nature? by cultivated disposition? by socialization?) epistemically lazy; jealous of what they already possess; and have an “instinctive dislike of an undecided state of mind, exaggerated into a vague dread of doubt”

indeed, sometimes the method is deliberately adopted

- 2. there are no grounds for saying the method is irrational, for it satisfies the human need to come to belief,⁵ and does so in accordance with psychological laws
- 3. issues:
 - a. nothing in this method conduces to truth, and indeed the method ensures that the person is refractory to truth-conducive evidence (if it does not already support what she believes)
 - b. we cannot accuse the person of irrationality, for rationality is not one of her aims—so can we not rationally dispute about ends, aims and goals?
 - c. and there is much to say in favor of what conduces to a “great peace of mind”

authority the fixing of belief in the community at large by the application of force of every kind

- 1. tenacity is weak in the face of social pressure, and so the realization that others think forces one to compare one’s belief with that of others, a mutual influence, leading to the problem of fixing belief “in the community”, and the method of authority is singularly well suited to solving that problem, for its entire aim is the fixing of communal belief by that most efficacious of agents, brute force
- 2. “natural” sympathy and a need for fellowship drive one to shape one’s beliefs so as to accord with the “communal” ones (which, by the by, leads to the most horrific atrocities, for we are really not nice creatures at bottom, more concerned with control and orderliness than individual flourishing and mercy)
- 3. there is now a two-fold character to the fixing of belief, those who force (who may or may not come to and hold on their beliefs by tenacity or authority) and those who are forced—in particular, the method applies only to those who are forced
- 4. issues:
 - a. does “communal belief” mean anything more than a reductive “belief of each individual taken one by one”? seems so, especially in light of such locutions as “the will of the state” (p. 117) which directly invoke an emergent conception of a “general will” such as that of Rousseau (*volonté générale*)
 - b. whence the communal beliefs that one conforms to? I suspect this is a question with a long disjunction of radically different yet illuminating and correct answers
 - c. what is the segue from, on the one hand, the recognition that other have beliefs that may be valuable and yet may be contrary to one’s own to, on the other,

⁵ Cf. Nietzsche’s aphorism, “Man would rather believe nothing than not believe.”

setting oneself (or a group of fellows) up to dictate and control communal belief at large? why does the one lead (naturally? as a fact about our societal conventions and standards? as a brute empirical generalization about our psychology?) to the other? Peirce simply slides from one to the other at the top of p. 117; what is most novel in the method of authority is the forcing of belief *on others*, for the willful adherence to belief that typifies tenacity is still here in the ardent belief of the indoctrinated, but the way that novelty arises from the instability of tenacity is not clear; I suggest the following: the recognition in the state of tenacity that others’ beliefs may be both contrary to one’s own *and* valuable engenders the irritant of doubt; the removal of that irritant is the goal of inquiry, *i.e.*, any method of fixing belief; one manifestly efficient way for removing (at least) this kind of irritant, so as to achieve greater epistemic stability, is to ensure that everyone believes the same thing, which is most effectively brought about by the application of force—and if no one else will do it, then, by god, I’ll have to do it on my own (the origin of tyrants—in their need for relaxation and repose)

- d. there is a sense in which one may think of the submission of the forced to communal belief as a form of tenacity, where the agency is external; in standard forms of tenacity, the egancy of belief is internal
- e. why is the method *morally* superior (p. 118) to tenacity? perhaps related to the reason that the scientific method is the most morally good, the “integrity” of beliefs? but that is not what Peirce says—immediately on proclaiming the moral superiority of authority to tenacity he rather launches into a pæan to the sublimity of the cultural works it makes possible—which may still be related to integrity, coherency, consistency of thought, which is what makes such sublime cultural achievements possible, and which authority certainly has more of (in one sense—across agents rather than within each agent individually) than does tenacity
- f. it is indubitably superior with regard to the “sublimity” of its large-scale social results
- g. if, as seems likely, most humans’ “highest impulse” (highest? not “strongest”?) is to be “intellectual slaves”, then there is no disputing the aptness of this method for them—and, again, it seems there can be no rational dispute about ends, aims and goals, “impulses”
- h. nothing about the method is truth-conducive

a priori the development of beliefs according to what is viewed as a higher calling than force, through conversation with like-minded people, so as to be “in harmony with natural causes” (p. 118)

- 1. the community cannot regulate every belief, and so we are thrown back upon our own resources, and those with a “wider sort of social feeling” will see that many different peoples (not just those they immediately interact with, as in the move from tenacity to authority) have held and do hold many different customs and belief systems
- 2. they come to recognize that it is historical accident that they believe most of what they do based on societally mandated scriptures, and so doubt arises

3. they reject “willful adherence to a belief [tenacity], and the arbitrary forcing of it upon others [authority]”
4. somehow, that rejection leads to the reflective and contemplative conversation and the attention to natural causes
5. traditional metaphysics is perhaps the exemplar *nonpareil*
6. issues:
 - a. no concern with conformity to observation about how the world actually is
 - b. “It makes of inquiry something similar to the development of taste; but taste, unfortunately, is always more or less a matter of fashion.”
 - c. indeed it does not differ in its essentials from authority—only a different kind of force is applied, not the will of a group of people but rather the influence on thought and sentiment of accidents of place, time, culture, and so on
 - d. so neither is it *per se* truth-conducive, though it may be *per accidens*
 - e. nonetheless, it has a great novelty that constitutes a great advance over authority (p. 118, emphases mine): “a new method of settling opinions must be adopted, which shall not only produce an impulse to believe, but shall *also decide what proposition it is which is to be believed*”—it is a method that *adjudicates* among competing propositions as potential targets of belief

scientific investigation its description is the subject of the remaining papers; but this much can now be said

1. the recognition that even principles that seem to accord with “higher callings” are epistemically unstable, and, moreover, do not easily accord with “observed facts” (pp. 118–119) leads to the development of a conception of “reality” independent of our “opinions about them” (p. 120)
2. the method of inquiry, therefore, must be such that it rests upon what can affect every person, and such that every person following it, in the same circumstances, will come to the same conclusion
3. in particular, in order to mitigate the flaws of the *a priori* that led to its instability, the method should be such that:
 - a. “our beliefs may be caused by nothing human, but by some external permanency—by something upon which our thinking has no effect”
 - b. it “affects, or might affect, every man”
 - c. “though these affections are necessarily as various as are individual conditions, yet the method must be such that the ultimate conclusion of every man shall be the same”
4. thus, it requires as hypothesis:

There are real things, whose characters are entirely independent of our opinions about them; those realities affect our senses according to regular laws, and, though our sensations are as different as our relations to the objects, yet, by

taking advantage of the laws of perception, we can ascertain by reasoning how things really are, and any man, if he have sufficient experience and reason enough about it, will be led to the one true conclusion.

5. this all raises the questions:

- a. the demand that our beliefs may be caused by nothing human must, presumably, be carefully circumscribed—when we are reasoning *about humans*, we surely want our beliefs to be caused by them; so how to give a clear statement of exactly *how* our beliefs ought not be caused by humans—what needs constraint? circumstances of belief formation? type of reasoning? content of appropriate beliefs?
- b. whence the demand for *permanency*? so that all people will always, at all times, come to the same conclusions? why is that required? if the world changes in its fundamental character, shouldn’t our epistemic capacities be able to track that? or is the permanency of a different kind?
- c. why the demand for (potential) universonality, *i.e.*, the cause of belief must—in some sense not spelled out—affect all people “the same”? what about those whose “highest impulse is to be intellectual slaves”? what would be lost if they were incapable of being affected rightly by the cause of reasoning in the scientific method? perhaps this has something to do with the ideal community of reasoners that is supposed to ground, ultimately, the validity of scientific reasoning for Peirce (which will come up later in Peirce 1992b, 1992e, 1992a)
- d. why does the method prohibit reasonable disagreement, at least, presumably, in the long run—or does it do so also in the short term, if everyone involved has access to “the same evidence”? will individual circumstance, or something else, be allowed to produce principled disagreement in the short term? because disagreement in the long run would yield indissoluble and so intolerable doubt (in the recognition that other smart people are believing things contrary to your own beliefs)? and thus short-term disagreement is not only allowed but indeed desirable, as the engine of investigation and inquiry that will drive us to reach the communal consensus that constitutes truth?
- e. how “thickly” are we to take the postulated realism—can it be, *e.g.*, only that the results of experiments must be taken to be “real” and independent in an appropriate sense? or must we postulate “quality realism” or “entity realism” (both in some rich metaphysical sense)?

6. contrasts with other methods:

- a. “This is the only one of the four methods which presents any distinction of a right and a wrong way.”
- b. in particular: “The test of whether I am truly following the method is not an immediate appeal to my feelings and purposes, but, on the contrary, itself involves the application of the method. Hence it is that bad reasoning as well as good reasoning is possible”—does this imply a vicious regression or circularity in justification? or is this what exactly prevents any epistemic instability from leading to a new method, why the buck stops here for methods of fixing belief? the method is *self-correcting*

7. to choose to adhere to the scientific method is to make “a choice which is far more than the adoption of any intellectual opinion, which is one of the ruling decisions of his life, to which, when once made, he is bound to adhere”
 - a. it is not, it seems (or at least not entirely) a proposition whose truth value is to be reckoned, but rather a style of thought that ramifies into all the practicalities of life
 - b. why (how) does it “bind on for life”? is this in contrast to the other methods from which, it would follow, one can “escape”?
8. and finally, perhaps most shocking: “what is more wholesome than any particular belief is integrity of belief, and that to avoid looking into the support of any belief from a fear that it may turn out rotten is quite as immoral as it is disadvantageous”
 - a. epistemology and science have a *moral* underpinning!
 - b. this reinforces the idea that the scientific method is not a proposition to be asserted and affirmed (though the postulation of realism itself surely is), but rather a matter of “integrity of belief”, *viz.*, the fact that one’s beliefs—their contents, how one forms them, how one modifies them, how they bear on one another—exhibit some normative characteristic, manifest some style of quality and behavior
 - c. but—what is the system of morality that Peirce assumes here? Kantian? utilitarian? virtue-based? something else entirely?

global, final or miscellaneous issues:

1. what does this story of developmental evolution, the way that epistemic instability in one method leads naturally to the next method, come to? is the progression chronological? a logical reconstruction? a matter of conceptual dependence? an instance of psychological or societal laws of evolution?
2. is this list of 4 supposed to be exhaustive? are there no other methods of inquiry? seems doubtful that these are all, given the laxity of Peirce’s characterization of “inquiry” (recall the Rube Goldberg device for fixing belief through direct electrical stimulation of the neurons—that fits the bill);
3. perhaps these are the “most important” in some sense? if so, then in what sense?
4. is the idea that these 4 will more or less accommodate all “standard” instances of inquiry, just as a brute empirical fact about how most humans operate most of the time?
5. one would like to have an argument that these are the 4 to focus on (perhaps something to do with semiotic and thought as signs?);
6. in any event, it is well to remember that, even with these 4, they are clearly not rigorous definitions of precisely delineated entities, but rather many instances of inquiry will share aspects of more than one, that there is a continuity among them, cases where one gradually and continuously eases into the other

7. I cannot resist pointing out the remarkable similarity, in tone, in content, even in central metaphor, of the final paragraph of the paper to Nietzsche’s preface to *Jenseits von Gut und Böse*

5 Seeds of Pragmatism

1. p. 111 (emphases mine):

[Lavoisier’s] way was to carry his mind into his laboratory, and to make of his alembics and cucurbits *instruments of thought*, giving *a new conception of reasoning*, as something which was to be done with one’s eyes open, by *manipulating real things* instead of words and fancies.

Experimentation in and with the world as a method of reasoning—reasoning is no longer a purely mental, cogitative affair; experimental tools become the embodiment of thought processes.

2. the progression of methods of inquiry from worst to best follows a deepening and strengthening of what is *healthy* in how the individual in practice interacts with, is shaped and informed by, and in turn shapes and informs, the communal and societal—but that is the heart of pragmatism
 - a. the method of tenacity is an epistemic solipsism; it cannot “hold its ground in practice” as “[t]he social impulse is against it” (p. 116)
 - b. the method of authority arises from tenacity [*** fill this in ***]
3. the scientific method is a style of thought that ramifies into all the practicalities of life—compare to the maxim of pragmatism as promulgated, *e.g.*, in Peirce (1905)

6 Invitation to a Short Essay

As usual, I invite you to write me a short discussion (no more than 2 pages, *i.e.*, no more than 1000 words) on any issue discussed in this week’s reading. You can raise further questions, propose answers or interpretations, or whatever seems of most interest to you. If you get it to me by the start of next lecture (7. July), then I will return it to you with my comments the following week.

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