The Role of Optimism in Abduction

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Abstract:

Optimism may not seem like a topic with which good scientific minds need bother themselves. After all, it would seem that neither optimism nor pessimism should have anything to do with the neutral and objective performance of good scientific reasoning. Science (for which we will here include the philosophy of science) is usually thought of as a collection of disciplines from which well-trained minds seek actual truths‹not an arena for seemingly psychological factors such as “optimism” and “pessimism.” Yet if so, then why would Charles Sanders Peirce, perhaps the consummate scientific mind of the nineteenth and twentieth centuries, even bother to deal with the issues of optimism and pessimism, as he does in his 1908 Monist article on reasoning: “A Neglected Argument for the Reality of God?” What is more, why would such a prodigious scientific mind insist upon the necessity of an attitude (optimism) as an essential component of the performance of the most important aspect of his theory abductive reasoning? Although it may not seem so at first glance, the case for optimism as a necessity for abductive reasoning is a strong one, and not in the least psychologistic. For optimism is a spacious filter through which a greater number of options can become available for consideration, than when any form of pessimism is in place.

Keywords: Abduction, Optimism, Pessimism, Attitude, Firstness, Musement

Introduction

Abduction, according to Peirce, is the method by which good hypotheses (or purposes) are constructed, in science as well as other deliberate disciplines. Abduction, according to Peirce, is the only method by which new discoveries can be made. So, why has he brought up this issue of “optimism” in relation to abductive reasoning? After all, Peirce was not a psychologist–and even scolded pragmatist, William James, for his psychologistic approach. Peirce was certainly not in the habit of paying attention to unprovable or irrelevant issues. Yet, he shows “optimism” as playing a significant part in abductive reasoning in “A Neglected Argument for the Reality of God.” (Peirce, 1908/1958, pp. 358-379)

The following will show that Peirce’s insistence upon an attitude of optimism in abductive reasoning is not merely the result of fuzzy, psychologistic thinking by an old man nearing the end of his life. On the contrary, his insistence on the role of optimism in abduction adds something new to the understanding of his concept of abductive reasoning. In explicating the process of abductive reasoning, Peirce lays out the attitude

from which abduction must be approached, if it is to be properly performed. The optimist/pessimist dichotomy in Peirce's "Neglected Argument," while aimed at arguing for the "Reality of God," is directly applicable to the proper performance of abductive reasoning concerning *any* topic.

Attitude

Peirce's mention of the attitudes of optimism and pessimism in "A Neglected Argument for the Reality of God" is not Peirce's only indication of an apparently psychological aspect to good reasoning. In his 1905 essay ("What Pragmatism Is"), he mentions that even someone with an *experimentalist* sort of mind will not think properly "upon topics where his mind is trammeled by personal feeling or by his bringing up." (Peirce, 1905/1955, p. 251) Though some might want to dismiss such remarks as irrelevant, Peirce's concept of "an optimistic attitude" affecting reasoning is neither frivolous, nor is it a psychologistic turn in his concept of reasoning.

Why not?

To answer this, we need to turn to Peirce's 1868 essay, "A New List of Categories."(Peirce, 1867/1992, pp. 1-10) There, Peirce established a set of categories, which he termed "firstness," "secondness," and "thirdness." These categories are the keystone of his philosophical system. Nearly everything else that Peirce wrote after this early piece was founded upon this set of categories. Peirce argued for this set of universal categories by showing that it is necessary for bringing together all of the elements of experience. So, just as in Peirce's cosmology, energy (as potential, impulse–or "firstness") is required in order for "brute action" to occur (movement, relation–or "secondness")(Peirce, 1905/1955, p. 266), so too, attitude (or "firstness" as feeling, impulse, value, intention) provides the fuel for human sensation (or "secondness" as unmediated action). For, without the potentiality (or aliveness) inherent in "being" (the "firstness" state), which is provided to humans as affect or feeling, we would have no energy for fueling "existence" (the "secondness" state), which we humans experience by means of sensation. Without feeling and sensation, we would not be able to engage in reality. After all, without "being" (firstness) and "existence," (secondness), we could not, ourselves, be or know "reality" (thirdness). According to Peirce, even when energy and action are taken together, they are not enough to make up reality (Peirce, 1905/1955, p. 266). Reality, expressed as generality, habit, and regularity (thirdness), emerges from the patterns of relationships that result from mediating energy or feeling (firstness) and action or sensation (secondness) (Peirce,

1905/1955, p. 266).

However, although "energy" and "attitude" are both elements of firstness; and "action" and "sensation," of secondness, they are importantly different in the ways in which they are expressed. "Reality," as the consequence of mediated firstness and secondness, expresses differently in the mental and physical realms. To understand the importance of optimism in abductive reasoning, we need to understand this difference.

- In Peirce's *cosmology* (the physical realm), thirdness is the *non-deliberate* application of habit or law which allows the universe to maintain itself (and to respond with the pull of habit – as homeostasis – to make a balanced adjustment to chance events (Peirce, 1893/1955, "Evolutionary Love"). Cosmological laws will continue to operate regardless of human intervention. For example, we do not have to "sing" the sun up each morning as one New Mexico tribe was known to do.
- But, in Peirce's concept of *thinking* (the mental realm), thirdness is either *deliberate or non-deliberate*. If non-deliberate, mediation (thirdness) is the "habitual" promoting and retarding of feelings and actions toward the development of resulting outcomes. If deliberate, mediation (thirdness) involves the "conscious" promoting and retarding of feeling, action, and sequence into particular patterns of action–depending upon the purpose, the known context, and those yet-to-be-known elements which may affect the eventual consequences of a proposed action or concept.

In other words, human minds are guided by attitudes–sometimes habitually, and at other times deliberately. As with the development of any habit, the practice of the using of a particular attitude (whether optimism or pessimism) will, over time, result in concretization of that attitude into an attitudinal habit. The only way to change any habit is to deliberately change the attitude–and the actions which ensue from that attitude. This is because attitudes fuel actions. Human minds mostly rely upon the pull of habit–which includes habitual attitudes. Occasionally we meet with the surprise of doubt, which will sometimes cause us to begin to make deliberate choices of conduct. Doubt, if only for a moment, interrupts the pull of habit. Nothing else can.

The purpose of inquiry (scientific or otherwise) is to identify and settle doubt. This being the case, then we need to understand what doubt is and what it is not. Doubt, according to Peirce, is "the privation of habit" (Peirce, 1905/1955, p. 257) (and is in many ways equivalent to his *doctrine of chance* – Peirce, 1892/1955, "The Law of Mind"). "Now a privation of a habit," Peirce tells us, "in order to be anything at all, must be a condition of erratic activity that in some way must get superseded by a habit (Peirce, 1905/1955, p. 257). "All you have any dealings with throughout your life, says Peirce, "are your

doubts and beliefs, with the course of life that forces new beliefs upon you and gives you the power to doubt old beliefs” (Peirce, 1905/1955, p. 257). Thus, according to Peirce, we are, at all times, either acting based upon a belief (which Peirce defines as a habit of mind), or we are attempting to settle a doubt. Once a doubt has been settled, the “erratic activity” of doubting can be “superseded by a habit.”

Only by means of honest doubt (not “radical” Cartesian doubt, which Peirce mocks as mere pretense) can we arrive at the point of noticing a “surprising fact,” and begin the process of making an abductive inference. Doubt is the most essential ingredient of abductive reasoning. Without the capability for honest doubting we cannot apprehend “surprising facts.” In other words, without the capability for honest doubt, we cannot (regardless of attitude or desire) perform the first step in abductive reasoning.

In “A Neglected Argument for the Reality of God,” Peirce provides us with the stages and phases of reasoning. He tells us that the very first stage of reasoning is “abduction,” which he defines there as the phases of a form of Pure Play–Musement.(Schiller, 1794) Abduction is the only method by which anything new can be discovered, thus enabling the formation of hypotheses. (Note: to be a good scientist then, one must be capable of abductive reasoning.) Peirce states that the second step in reasoning is explication and demonstration of a hypothesis–these activities correspond to the role of “deduction.” The third step, Peirce tells us, is testing and evaluation, which corresponds to “induction” (Peirce, 1908/1958). The interplay of abduction, deduction, and induction provides for the discovery, development, testing, and evaluation of worthy hypotheses and overarching purposes, which may consist solely of aesthetic and ethical values (Chiasson & Davis, 1980).

Once he lays out his “Argument” for the “Reality of God,” Peirce makes a surprising claim, which he states in two ways. First he tells us that everyone “whose disposition is normal” will agree with his conclusions. Then, he notes that pessimists will not agree with his argument, because they are not “thoroughly sane.” Peirce explains that:

> The difference between a pessimistic and an optimistic mind is of such controlling importance in regard to every intellectual function, and especially for the conduct of life, that it is out of the question to admit that both [optimists and pessimists] are normal, and the great majority of mankind are naturally optimistic. (Peirce, 1908/1958, p. 377)

Since “the majority of every race depart little from the norm of that race,” he concludes that optimism is “normal,” and that pessimism is not.

Next, Peirce takes the time to describe three types of pessimists–perhaps so that they,

and others, may note who they are. For, it is not uncommon in everyday experience to meet up with one or more of these three pessimistic types whom Peirce describes, many of whom would vigorously deny their pessimism. Since Peirce never included any irrelevant terminology or definitions in his works (adhering to his own doctrine of terminological ethics (Chiasson, 2001, pp. 29-36), we can assume that the descriptions (listed below) of the three types of pessimists are important for the point he wishes to make about optimism and abductive reasoning. The three types of pessimists include:

1. those “exquisite and noble natures of great force of original intellect whose own lives are dreadful histories of torment due to some physical malady” (Peirce, 1908/1958, p. 377). In other words, those whose pessimism is due to experience, trauma, or illness, will not have access to the full spaciousness necessary for optimum abductive reasoning, even if they are otherwise intellectually brilliant.
2. those sorts who are cynical (misanthropical) by nature; “the type,” Peirce tells us, “that makes itself heard.”
3. philanthropical types who are “easily excited and become roused to anger at what they consider the stupid injustices of life. Being easily interested in everything, without being overloaded with exact thought of any kind, they are excellent material for *littérateurs*“(Peirce, 1905/1955, p. 255)[1]. In other words, this type includes those well-meaning persons who are overwhelmed by feelings of sadness, outrage, or unfairness. They become overwhelmed and discouraged by their negative (pessimistic) feelings. When this type of pessimism is combined with the lack of ability for exact thought, boundaries are erected against the sort of options that might ameliorate whatever is causing the pessimism to begin with. (Peirce, 1877/1955, “Fixation of Belief”, pp. 5-22)[2]

Naturally, these three types of pessimists are not likely to perceive themselves as pessimists. They may strongly assert that their attitude is not one of pessimism, but rather reflects a true perspective based on “experience,” “realism,” or “compassion.”

In any case, Peirce appears to be indicating that a pessimist cannot perform abductive reasoning properly. Such a claim makes perfect sense if we consider that Peirce’s first stage of abduction is supposed to be undergone without rules or restrictions as to what can or cannot be considered. Those with pessimistic outlooks eliminate the possibility of examining anything with an open mind. All sorts of potential relationships will remain unexplored. Thus, pessimism is a limiting factor, crowding out the availability of entire sets of options for consideration by means of critical thought.

Now, some people confound the terms “critical” and “cynical.” This is a mistaken synonymy. Cynicism, a form of pessimism, is a hindrance to “critical thought.” The

capability for “critical thought’ is the capability for honest doubting. Pessimism, on the other hand, binds up the capability for honest doubt, since it *locks out* an entire range of possible topics for consideration. Therefore, since the perspective of pessimism limits the contents of what can be dealt with, a pessimistic individual is not able to engage fully in the abductive process. Pessimism limits the quantity and qualities of possibilities available for consideration.

Of course, optimism alone will not guarantee the selection and construction of good hypotheses, nor will a pessimistic outlook necessarily produce bad hypotheses. An attitude must be connected to conduct if it is to mean anything at all in a pragmatic sense, as the meaning of every proposition lies in its effects upon human conduct. The way in which an attitude is connected to conduct affects the good (or the damage) the attitude will foster. For example, an optimistic belief that ‘everything is going to turn out fine’ is not enough to make it do so. Optimism of this sort is “unbridled”–a sort of “magical thinking.” It is unconnected to deliberate analysis or carefully planned action. “Unbridled” optimists often guide their behaviors by “positive affirmations,” faith in unquestioned beliefs, and *acritically* “proactive” activity. So, “unbridled” optimism can produce disasters due to “mindless doing,” just as pessimism can result in missed discoveries and missed opportunities due to “not doing.” Just as for the performance of a proposition, attitude connected to conduct is what gives that attitude its meaning. To paraphrase the pragmatic maxim, the meaning of any *attitude* resides in the *practical bearing* it has upon the conduct of human behavior(Peirce, 1905/1955, p. 259).

As mentioned earlier, Peirce argues throughout “Neglected Argument” that the development of a hypothesis is inexorably tied into the earliest stages of abduction–Pure Play. The only way for a person to engage in the sort of Pure Play that Peirce calls Musement is to be free, as much as possible, from any rules or boundaries guiding what can and cannot be considered or done. This means that Pure Play cannot be undergone from the perspective of pessimism, (though *Musement about pessimism* could be an activity of Pure Play). Pessimistically ignoring a situation, or dismissing the whole thing out of hand as pointless or impossible (as a pessimist might), eliminates possibilities of new discoveries in the dismissed areas. Pessimists may consider their approach (guided by pessimism) to be the correct one, because they can usually find something negative or hopeless within any situation. Pessimists then believe they are viewing the “truth” of the matter, not realizing that they have ignored important aspects, options, or possibilities of the situation from which a “fuller understanding of truth” can be derived.

Any situation has a better chance of ‘turning out well’ when individuals engage

themselves in an experience with an optimistic attitude. Honest doubting, especially from an attitude of optimism, makes available to individuals a greater range of possibilities. Honest doubting from an optimistic perspective also enables individuals to identify the constraints of a context from a broader perspective than pessimists would recognize. Thus, optimists capable of abductive reasoning are able to see a broader range of options and consequences, than are pessimists who are capable of abductive reasoning. An optimistic attitude, then, allows an individual to explore all sorts of possibilities–including the possibility of being pessimistic. So obviously, Peirce intended the meaning of optimism to indicate a perspective which allows the abductive process full reign in the production of worthy hypotheses.

Thus, it becomes increasingly clear that Peirce is indicating that it is the *inability to access hopeful options* due to a pessimistic performance of the abductive reasoning as Musement, which results in failures of abductive reasoning to produce worthy hypotheses. In other words, the level of effectiveness of an abductively derived hypothesis depends upon whether an attitude of optimism or pessimism is used to filter qualitative options. The attitudes of pessimism and optimism respectively, will limit or expand the options available for consideration during the abduction (again as Musement). So *pessimistic Musement* squashes possible options, while *optimistic Musement*, expands them.

Optimistic Musement allows for the sorts of hypotheses of which the *hypothesis of God* (as proposed in “Neglected Argument”) is a kind. In other words, the consequence of the optimistically performed *Musement* stage that is abductive reasoning is not merely a hypothesis about the “Reality of God.” Instead, a hypothesis about the “Reality of God” is the *sort of hypothesis* that can be an outcome of *any* optimistically performed abductive reasoning process. Thus, Peirce’s description of the construction of a hypothesis concerning the “Reality of God” provides an example of the method by which all hypotheses of consequence should be constructed–whether in science, education, parenting, politics, or personal values and goals.

Optimism then, falls within a category of attitudinal filters of an unfettered, or spacious, sort. These types of optimistic filters can include such spacious attitudes as vision, hopefulness, and open-mindedness. Optimistic filters allow into consciousness greater quantities of the *qualitative* raw materials upon which Musement (abduction) feeds. These qualitative raw materials provide the sorts of options an individual perceives as viable during the selection and rejection of possible relationships among things and ideas. The sorts of relationships each of us selects as worthy of exploration determines

the sorts of over-arching hypotheses–and eventually the sorts of beliefs–upon which each of us constructs a life. If these beliefs are limited in, for example, the “vision” department, there will be certain inevitable consequences. Beliefs direct conduct, and all conduct produces consequences based upon how the conduct is formed and acted out. Thus, since values, vision, purpose, and attitudes guide conduct, they are important aspects of the reasoning process. For a scientist, these determine the quality of the standards, methods, findings, and other consequences in his or her performance of scientific method. For all of us, values, vision, purpose, and attitudes determine the kinds of choices we will make; the quality of our lives; and the effect that we have upon the world in which we live.

The capability for engaging in the activity of abductive reasoning enables an individual to deliberately produce *qualitatively derived* hypotheses. Qualities that we attend to are based upon our attitudes (optimistic or pessimistic). In turn, those qualities, filtered by attitude, affect the values, vision, and purposes we choose, as well as the ensuing categories (sorts of things) from which we will continue to select. Viewed in this way, our attitude erects the framework within which we make our choices. From within this framework, we select specific examples for verifying or denying hypotheses (or purposes). In other words, we construct what is going to be true for us (in the case of science, and in the case of how we live our lives) based upon the attitude with which we have defined our qualitative parameters.

The optimistic application of abductive reasoning allows an individual to engage in an aesthetic exploration of options, according to the methods of “Musement” (or abduction), which Peirce describes. Optimism acts as a “possibility machine,” allowing the individual to consider all sorts of options without regard to limits, actuality, ethics, practicality, or feasibility. Once the abduction (or Musement) stage has passed (meaning that the possibility has been formulated into a tentative hypothesis) the option can be passed through the lens of ethics (or of right conduct) before it is established as a hypothesis worthy of development and testing. Restrictions upon Musement, then–such as pessimism, morality, or any other *a priori* limitation, limits the possibilities available to a reasoner. For this reason, optimism is essential to the proper performance of abductive reasoning.

Conclusion

Thus, in his essay “A Neglected Argument for the Reality of God” Peirce does not merely argue for the “Reality of God,” but rather argues for the Reality of the ways in which

one's attitude (or perspective) directs the performance of abductive reasoning. With this in mind, it would not be too far a stretch to temporarily change the religiously (and even politically) loaded word "*God*" into a more neutral term when contemplating this essay. Perhaps words like "purpose," "value," and "attitude" are adequate terms to use as we consider the effects of optimism and pessimism on the formation of hypotheses and the fixation of beliefs in general. After all, Peirce is not claiming that his proof for the "Reality of God" resides in an *after-life*, but instead resides in the effects which this belief has upon the way in which we conduct ourselves in *this life. This is the same claim that he makes for the meaning of all propositions* (Chiasson, 2001, pp. 21-23). Therefore, since Peirce's "Argument for the Reality of God" fully embraces all of his pragmaticistic claims, the attitude of optimism must be a crucial aspect of abductive reasoning, whether one is reasoning about God, science, education, philosophy, personal goals, or any other matter of import.

For Peirce, the investigation and practice of optimism is not to be relegated merely to the discipline of psychology. Optimism is a necessary component of reasoning–specifically the logic of abduction. Optimism offers the broadest landscape from which to make choices, and to thus correctly perform the stages of "right reasoning." So, although the issue of optimism may not have *seemed* like a topic that good scientific minds need bother themselves about, we can now see that there is good cause to consider optimism as an essential component of good reasoning and, as such, essential for effective scientific inquiry.

However, we are all human and subject to error. None of us can always be entirely neutral, or objective, or optimistic–even when deliberately performing scientific inquiry. It best be kept in mind then, that, as Peirce tells us, "there is only one state of mind from which you can 'set out,' namely the state of mind in which you actually find yourself when you do 'set out'…" (Peirce, 1905/1955, p.256). Thus, to be effective reasoners, we must continually reexamine, and adjust as necessary, the attitude with which we are addressing our beliefs and doubts–keeping in mind that anyone (including a scientist) who wishes to learn how to reason more effectively will need to cultivate the habit of optimism.

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Notes

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1. Peirce was not fond of these “literary types.” Though he had other reasons as well, in the above 1905 essay Peirce blames the necessity of the name change of his theory from “pragmatism” to “pragmaticism” upon littérateurs. He wrote: “But at present, the word

begins to be met with occasionally in the literary journals, when it gets abused in the merciless way that words have to expect when they fall into literary clutches.” ↩

2. Contrary to the “pessimistic philanthropical” types, there are “optimistic philanthropical” types, who fit every inch of the description of Peirce’s sharp-minded pragmatic optimist. Just think of Annie Sullivan, the teacher of Helen Keller, who, rather than pitying a poor, helpless, deaf-blind child, set about to take optimistic, pragmatic action. ↩