

## C. S. Peirce's Pathways to Belief

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*This article offers a summary and analysis of C. S. Peirce's four methods for resolving doubt. At the end I apply this system in some general activities for students. The fact that we resolve our doubts in different ways has clear rhetorical and political implications. I should point out that Peirce is not talking about religious faith, but facts, courses of action, and solutions.*

I recently read an interview in the New York Times Magazine with science fiction writer Neil Stephenson, whose most well-known books are probably *Snow Crash* and *Cryptonomicon*. Stephenson is a writer of big ideas who does lots of historical research, so I was interested when he said that he was reading "The Fixation of Belief" by American philosopher Charles Sanders Peirce (pronounced like "purse"), known for developing the branch of philosophy called "Pragmatism" and for his work in semiotics, the study of sign systems. In this essay, Peirce lists what Stephenson describes as "four methods that people use to decide what they're going to believe." Stephenson summarizes this list as follows:

The first one is called the method of tenacity, which means you decide what you're going to believe and you stick to it regardless of logic or evidence. The next method is called the method of authority, where you agree with other people that you're all going to believe what some authority figure tells you to believe. That's probably most common throughout history. The third method is called the *a priori* method, and the idea is, let's be reasonable and try to come up with ways to believe things that sound reasonable to us. Which sounds great, but if it's not grounded in any fact-checking methodology, then you end up just agreeing to believe things by consensus — which may be totally wrong. The fourth method is the scientific method. It basically consists of accepting the fact that you might be wrong, and since you might be wrong, you need some way for judging the truth of statements and changing your mind when you've got solid evidence to the contrary. . . . But what we've got now is almost everybody using Method 1, 2 or 3. We've got a lot of authoritarians who can't be swayed by logic or evidence, but we've also got a lot of *a priori* people who want to be reasonable and think of themselves as smarter and more rational than the authoritarians but are going on the basis of their feelings — what they wish were true — and both of them hate the scientific rationalists, who are very few in number.

That seems to me like a pretty accurate description of the current state of affairs, though Peirce was writing about this in the 1870's. Peirce's framework might

help students figure out our current polarization, why people believe what they do and where their own beliefs come from.

Peirce argues that all inquiry begins with doubt. Belief brings us comfort, but doubt is an irritant. When we are irritated by doubt, we try to eliminate it through inquiry to bring us back into the comfort of belief through one of the four paths described above by Stephenson. I will expand and apply them below.

## Tenacity

Of course, one way to avoid doubt is simply to never question your beliefs and avoid all facts, arguments, or authorities that might disturb them. This is the approach Peirce calls "tenacity" because such a person holds on to their beliefs at all costs. He doesn't exactly condemn this view because such a person, safe in the comfort of belief, may be happy and may have great peace of mind. Peirce is a pragmatist, so he is more interested in what works than in absolute Truth. However, he does note that we are social beings, and sooner or later we will encounter individuals with different views who may cause doubt that will unsettle us. He compares this approach to the proverbial ostrich with its head in the sand, which is perfectly happy while it can't see the lion, but may come to an unhappy end. Most of us know people like this. You probably have someone in mind as you read this.

## Authority

Peirce's discussion of the second approach, the method of authority, is not as benign as Stephenson's summary would imply. Peirce begins with thought experiment:

Let the will of the state act, then, instead of that of the individual. Let an institution be created which shall have for its object to keep correct doctrines before the attention of the people, to reiterate them perpetually, and to teach them to the young; having at the same time power to prevent contrary doctrines from being taught, advocated, or expressed. Let all possible causes of a change of mind be removed from men's apprehensions. Let them be kept ignorant, lest they should learn of some reason to think otherwise than they do. Let their passions be enlisted, so that they may regard private and unusual opinions with hatred and horror. Then, let all men who reject the established belief be terrified into silence. Let the people turn out and tar-and-feather such men, or let inquisitions be made into the manner of thinking of suspected persons, and when they are found guilty of forbidden beliefs, let them be subjected to some signal punishment. When complete agreement could not otherwise be reached, a

general massacre of all who have not thought in a certain way has proved a very effective means of settling opinion in a country.

Of course this pattern has been repeated throughout history by dictators, religious leaders, and powerful criminal organizations. It is often successful for a good long time and Peirce notes that some of the greatest building projects in human history have been accomplished by such regimes. He acknowledges that it is also possible for people to be happy in such an environment, though with some reservations. He says, "For the mass of mankind, then, there is perhaps no better method than this. If it is their highest impulse to be intellectual slaves, then slaves they ought to remain." Not exactly a ringing endorsement.

Peirce posits that when individuals from such an authoritarian regime encounter people from other communities they will discover that these foreigners believe things that are different from what they believe, yet are still successful. This can lead to critical thinking and is clearly why authoritarian regimes attempt to control information and contact with outsiders.

## A Priori

Rejecting the authoritarian method leads to Peirce's third path to belief which he calls "*a priori*," using a philosophical term from Latin that means using general principles to predict likely outcomes. Peirce says of this method,

Let the action of natural preferences be unimpeded, then, and under their influence let men, conversing together and regarding matters in different lights, gradually develop beliefs in harmony with natural causes. . . . Systems of this sort have not usually rested upon any observed facts, at least not in any great degree. They have been chiefly adopted because their fundamental propositions seemed "agreeable to reason." This is an apt expression; it does not mean that which agrees with experience, but that which we find ourselves inclined to believe.

As Peirce notes in this passage, the problem with this method, though it is more intellectually respectable than the first two, is that it is not necessarily based on observed facts, but is more like the development of fashion or taste. We might think of this method as shared habits of mind, ways of thinking that seem reasonable to most people in our group. It is not objective; instead it is a kind of group subjectivity obtained through consensus. This is the realm of rhetoric and for purposes of social cohesion, progress, even happiness, it can work quite well. It is what most of us do, most of the time. However, it does not lead to "Truth" with a capital T.

## Scientific Method

The fourth path to belief is the scientific method. The a priori method works pretty well for things that we are familiar with through long experience. However, sometimes problems arise which are not solved by our previous habits of mind, and new doubts arise. The Covid-19 pandemic we are currently experiencing is one such case. Peirce says, "To satisfy our doubts, therefore, it is necessary that a method should be found by which our beliefs may be caused by nothing human, but by some external permanency -- by something upon which our thinking has no effect." Scientists attempt to conduct objective research by observing and measuring phenomena, creating a hypothesis, devising methods to test the hypothesis, and sharing the results with other scientists for confirmation. Each scientific discipline has its own theories, methods, and standards for conducting research, but the basic scientific method is common to all of them.

Science is the most rigorous mode of inquiry. The goal is to find out what is really going on, not prove what we wish were going on, or even prove what we think is going on. It is also the most the most rigorous form of doubt. This is both the power and the weakness of science. Scientists are always doubting. Each answer leads to more questions. Each study is narrow and limited in its conclusions. Did rising CO2 levels cause more hurricanes or cause a particular hurricane to be more intense? Does the fact that a rover detected methane on Mars mean there is life there? Do masks prevent the spread of Covid-19? On each of these questions, scientists have data and can draw conclusions, but will probably hedge and qualify their answers. The scientific method is an attempt to factor human nature out of the inquiry, but when the results are presented to non-scientists, human nature re-enters the inquiry and conclusions are drawn according to the a priori method.

## Advantages of Each Method

Peirce thinks that scientific inquiry is the best way to turn doubt into belief, but he notes that the other three paths have their advantages.

The a priori method is distinguished for its comfortable conclusions. It is the nature of the process to adopt whatever belief we are inclined to, and there are certain flatteries to the vanity of man which we all believe by nature, until we are awakened from our pleasing dream by some rough facts. The method of authority will always govern the mass of mankind; and those who wield the various forms of organized force in the state will never be convinced that dangerous reasoning ought not to be suppressed in some way. . . . But most of all I admire the method of tenacity for its strength, simplicity, and directness. Men who pursue it are distinguished for their decision of character, which becomes very easy with such a mental rule. They do not waste time in trying to make up

their minds what they want, but, fastening like lightning upon whatever alternative comes first, they hold to it to the end, whatever happens, without an instant's irresolution. This is one of the splendid qualities which generally accompany brilliant, unlasting success. It is impossible not to envy the man who can dismiss reason, although we know how it must turn out at last.

Ironically, those who practice tenacity are the most decisive, while scientists, who have the the greatest possibility of being correct, are the most inclined to be cautious in their claims and decisions!

## Using the System

Pierce presents this system as if individuals largely practice one mode of belief, changing modes only when they encounter a successful and persuasive person who thinks very differently, or when circumstances simply make it impossible to continue to believe what they believe. In practice, most of us shift modes all the time, depending on the nature of the doubt. Let's simplify the system a bit:

1. **Tenacity:** I know what I believe. Don't bother to confuse me with your so-called facts.
2. **Authority:** I will believe what those with power or with knowledge and expertise tell me to believe.
3. **Habits of Mind** (what Peirce calls "*a priori*"): I will believe what my common sense tells me. I usually agree with my friends and like-minded colleagues.
4. **Science:** I will believe what a properly conducted scientific inquiry indicates is true, even if the conclusions are unwelcome or contrary to what I thought before.

If we are going to apply this system to a situation, a conversation, or an article, there are some questions we should ask:

- What question are we trying to resolve? In other words, what is the doubt?
- What path to belief (1, 2, 3, or 4) do each of the participants use? In other words, why do they believe what they believe?
- Who has authority or expertise? Why do they have it? (When Peirce describes "authority" he has dictators in mind, but even if we mainly act according to our habits of mind, we might also decide to follow the guidance of scientific or medical authorities. Not all authority is authoritarian or coercive.)

## Activities

**Activity 1:** In a small group of four or five, discuss a controversial issue. You might start with a broad question such as "What do you think we should do about X and why?" Assign one member to take notes on the discussion, writing down the name of the speaker and the gist of the argument they make. After each member of the group has spoken, look at the notes and try to decide which of the four paths to belief each speaker has followed. Remember that each path to belief has its advantages. After this discussion, the group reports their findings to the class.

**Activity 2:** This activity is similar to Activity 1, except that it is in writing. A group of four or five takes up a controversial issue. For 10 minutes, each member writes on the question, "What do you think we should do about X and why?" When the group has finished writing, each student passes their paper to another student. That student tries to decide which of the four paths to belief the writer has used in writing their response. Remember that each path to belief has its advantages. If there is time, pass the papers to another student and repeat. The responders discuss their findings with the group, then the group reports out to the class what they have learned from the activity.

**Activity 3:** Take two different op-ed pieces on a current controversial topic. In groups of four or five, have students analyze which paths to belief the writers relied on in making their arguments. After the discussion, the groups report out to the class. This activity will work best if the two opinion pieces make radically different arguments.

Our current society is quite polarized on many issues. Peirce does not talk much about conflicts between different pathways to belief, but I think that much of the conflict stems from conflicting pathways to belief taken by different groups. Activities such as the three above may help surface some of these conflicts and open possibilities for dialogue.

## Works Cited

Marchese, David. "Neal Stephenson Thinks Greed Might Be the Thing That Saves Us." *The New York Times Magazine*. 9 Jan. 2022.

Peirce, Charles S. "The Fixation of Belief" *Popular Science Monthly* 12 (November 1877), pp. 1-15.