



On being a detective

Description

As evidence of crimes and misdemeanours mount and circulate around the US president and his entourage, attention turns to matters of fact. Fact-checking is a major media sub-industry. See factcheck.org, politifact.com, and fullfact.org. It's also an exercise in **semiotic indexicality**.

I'm investigating how C.S. Peirce's theories about signs relate to his theory of *abduction*, i.e. making judgements under uncertainty, otherwise known as reasoning from evidence. The link between signs and abduction resides in the priority Peirce gives to *indexical* signs, and the translation of *indexicals* to *symbols*, i.e. to statements in language and logic.

Indexical signs

Of Peirce's 3 classes of signs (the *icon*, *index* and *symbol*), the most original and fruitful is the idea of the **index** according to commentator Thomas Sebeok (85). An indexical sign is a sign that *derives* from its object. Smoke is a sign of fire, because the smoke issues from the fire. We may even say the smoke is caused by the fire. Blood on the walls is an indexical sign of a violent struggle, as the blood stain derives from the event, i.e. an event involving the body of a victim suffering catastrophic trauma.

In the case of an indexical sign there is some process that connects the object to the sign. Peirce says: "An index stands for its object by virtue of a real connection with it" (14). You don't necessarily see the object that the sign connects to, but you see the indexical sign that has emerged from the object. If you look up at a clear sky you may see a condensation trail. You don't see the aeroplane, as it's too far away, or it has disappeared over the horizon, but the condensation trail tells you the plane is or was there. The contrail is an indexical sign of a jet propelled aircraft.



Signs and facts

The idea of the **index** is privileged in the realms of fact. An actual murder yields the sign of a blood stain. An imaginary murder does not oblige us with the inevitable emergence of such an indexical sign. You could say that imagination does not yield indexical signs. Nor do lies. The object of an index is actual and factual – or at least that is the claim we make of it.

Contrary to an indexical sign, an **icon** is a sign that resembles its object in some respects. A drawing of a murder is pretty much a pure icon of its object. A drawing doesn't derive from its object in the same way that an indexical sign derives from its object. A photograph is a different matter however.

A photograph or CCTV video of a murder taking place has more authority in a discussion about facts than a drawing, as the photograph does derive from the circumstances, the object, by virtue of some optical and mechanical processes, even if there's a risk the photograph or video is subsequently manipulated. Devotees of Peirce's sign classification system are happy to assign photographs to the class of indexicals, though there is also an *iconic* aspect to photographs. They do "resemble" their objects in some respects.

Contrary to both an index and an icon, a **symbolic** sign functions differently in the ecology of facts. Apparently, the ruins of the [ancient Mexican city of Monte Alban](#) are marked with so-far undecipherable symbols. The practices, places and rituals of that culture (as objects) do not cause or produce these obscure symbols, as if *indices*. Nor do they provide *iconic* signs that resemble their objects. Symbols don't have as secure a hold over their objects as do indexicals. Symbols are not so easily brought into service within discussions about facts.

That said, symbols, by Peirce's definition, are cultural artefacts that conform to convention. All symbols are *legisigns*, forming systems with their own internal relational rules. There are many symbolic systems, including computer languages, emoticons, and astronomical signs. Spoken and written languages provide the most obvious day to day examples of symbolic sign systems. Peirce divides symbolic signs into *words* (rhematic symbolic legisigns), ordinary *propositions* (dicent symbolic legisigns) and *arguments* or rules (delomic symbolic legisigns).

Objects don't deliver symbolic signs as if indexicals. A tree as object will not speak "I am a tree" as symbolic sign. Not does it come with a ready made botanical label. A murder weapon will not cry out "I belong to the prime suspect." Symbolic signs do not derive from their objects as indexicals do from theirs.

Facts and symbols

However, symbols (words, propositions and arguments) are essential currency in the world of facts. There are many ways of apprehending the world, but facts are statements in language. You don't look at a contrail in the sky and think "fact" without some accompanying statement: e.g. "there is a plane up there." Facts are statements in language, a language composed of symbols.

Symbols carry the advantage that they can be linked, managed, inventoried, and processed. Indexical signs are not so easily manipulated. But by most accounts, one of the hallmarks of being a rational human is that I can translate indexicals to symbols. It is the ability to speak about the world that makes us rational.

From the perspective of semiotics, the world we occupy is less a world of objects than of signs. That is one of Heidegger's misgivings about sign systems, by which he means symbolic signs. For Heidegger, there is a more direct and immediate engagement with the world than sign systems afford. However, from a Peircean perspective we need symbolic signs none-the-less, and they are essential for human communication.

I have already stated that indexicals are primary amongst Peirce's sign classes. Indexicals are tied to their objects through a process, and emerge inevitably from their objects, or at least they derive from their objects with a high degree of certainty.

To talk about an *object-indexical* relationship is to translate an indexical sign situation into a symbolic one. That renders the sign situation amenable to processing, manipulation and negotiation. After all, we do talk and write about indexical relationships: e.g. "look at those white streaks criss-crossing the sky," "dark red stains on the carpet are either blood or red wine," "where there's smoke there's fire".



Indexicals and logic

Peirce's characterisation of the syllogism illustrates the relationship between an object and its indexical sign. In general terms, an indexical syllogism looks something like this.

this is a particular *object*
this kind of object produces a particular *indexical sign*
therefore, this *indexical sign* will appear.

Here's a simple example.

this is a fire
fire produces smoke
therefore, smoke will appear.

That's a logical *deduction* from a premise and a rule to a conclusion. *Induction* is the production of a generalisation, a rule, derived from a statement about an object and an indexical sign. An astute and rational observer of signs ought to wait till they have encountered several similar object-sign relationships before jumping to the generalisation as a conclusion.

this is a particular *object*
this *sign* appears
therefore, this object produces this sign

this is a fire
smoke appears
therefore, fire produces smoke

As is well known to Peirce scholars, Peirce introduced a third mode of inference within the syllogism: [abduction](#). This is the term Peirce uses to characterise the process by which an observer concludes the presence of the object from the presence of a particular sign.

an indexical sign has appeared
this object will produce such an indexical sign
therefore, this object is present

smoke appears
fire produces smoke
therefore, there is a fire

A prudent observer would come to such a conclusion (the presence of an object from its supposed sign) with some caution. There may be other candidate objects that produce the same sign. History is replete with stories of misattributed causes, i.e. the hasty identification of an object from indexical signs that are merely circumstantial. Think of the putative association between "witches" and catastrophe.

Evidence

The extra-logical process of *abduction* is more obvious in the case of detective work, and observations of signs such as blood stains. What happened, how, and who did it typically requires the detective to

gather up more *signs* that corroborate any of a number of *objects* in the semiotic process (semiosis).

In such cases the signs are *evidence*. Outside of semiotic discourse the detective (or enthusiast following a case) might simply say they are looking for evidence. See post: [Internet as evidence](#).

References

- Kruse, Felicia E. 1986. Indexicality and the abductive link. *Transactions of the Charles S. Peirce Society*, (22) 4, 435-447.
- Peirce, Charles Sanders. 1998. Of reasoning in general. In Nathan Houser (ed.), *The Essential Peirce, Selected Philosophical Writings Volume 2 (1893-1913)*: 11-26. Bloomington, IN: Indiana University Press.
- Sebeok, Thomas A. 1999. *Signs: An Introduction to Semiotics*. Toronto: University of Toronto Press

Note

- The first image is of contrails near Edale, Derbyshire. The second image is of the Edinburgh Beltane Fire Festival, 31 May 2018.

Category

1. Nature
2. Podcast

Tags

1. abduction
2. evidence
3. index
4. Peirce
5. semiotics

Date Created

May 19, 2018

Author

rcoyne99