

Handout 14: The Predicate Containment Principle

Philosophy 322: Modern Philosophy
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In the *Discourse on Metaphysics*, section 8, Leibniz writes:

Now it is evident that all true predication has some basis in the nature of things and that, when a proposition is not an identity, that is, when the predicate is not explicitly contained in the subject, it must be contained in it virtually. [...] Thus the subject term must always contain the predicate term, so that one who understands perfectly the notion of the subject would also know that the predicate belongs to it (Leibniz, p. 8).

Leibniz is giving one statement of his famous PREDICATE CONTAINMENT PRINCIPLE:

PREDICATE CONTAINMENT PRINCIPLE (PCP)

In every true proposition, the predicate is somehow contained within the subject.

But what does this mean?

PROPOSITIONS, SUBJECTS, AND PREDICATES

A *proposition* is the meaning of a complete declarative sentence. Why not simply say that a proposition *is* a complete declarative sentence? There are many reasons. Here is one. Two different sentences can have the same meaning. One way to capture this fact is to say that two sentences can express the same proposition. For example, (1a) and (1b) are different sentences, but have the same meaning, and so are said to express the same proposition:

(1a) Snow is white.

(1b) Schnee ist weiß.

Sentences are made of words. What are propositions made of? Natural answer: they are made of the meanings of words. What are the meanings of words? Natural answer: the meaning of a word is the concept we associate with that word. So the proposition expressed by (1a) and (1b) is constructed of the concept associated with 'snow' (which is also the concept associated with 'Schnee') and the concept expressed by 'is white' (which is also the concept expressed by 'ist weiß').

Each of the sentences above has a subject and a predicate: the subject of (1a) is 'snow' and the subject of (1b) is 'Schnee'; the predicate of (1a) is 'is white' and the predicate of (1b) is 'ist

weiß'. The corresponding proposition has a subject and predicate as well. The subject of the proposition is the part of it that corresponds to the subjects of the sentences: the meaning of 'snow' and 'Schnee', i.e., the concept of snow. And the predicate of the proposition is the part that corresponds to the predicates of the sentences; i.e., the concept of being white.

ANALYTIC TRUTHS AND "CONTAINMENT"

When Leibniz says that the subject term of a proposition "contains" the predicate term, what does he mean? We can understand this notion very literally. Concept A contains concept B just in case concept B is a part of concept A. Consider the following two concepts:

(2a) The concept of a polygon having three sides

(2b) The concept of having three sides

The concept denoted by (2b) is part of the concept denoted by (2a); (2a) contains (2b). Now consider the proposition:

(3) A polygon with three sides has three sides.

The subject of (3) is (2a) and the predicate of (3) is (2b). So here is an example of a proposition where the predicate is contained in the subject. Notice that (2a) is the same concept as the concept of a triangle. So the concept of a triangle also contains (2b). Hence in (4), the predicate is also contained in the subject:

(4) A triangle has three sides.

To *analyze* a concept is to break it down into its constituent parts. By analyzing the concept of a triangle, we can see that it contains the concept of having three sides. So anything that is a triangle must also be something with three sides. With a proposition like (4), then, merely analyzing the subject makes it clear that the proposition must be true. Kant called truths such as (4) *analytic*. Any truth where the predicate is contained in the subject is an analytic truth.

According to the PCP, *every* truth is analytic: i.e., in every true proposition, the predicate concept is part of the subject concept. This is a very strong claim. Consider, e.g., (5):

(5) Julius Caesar became perpetual dictator.

The PCP tells us that if (5) is true, then the concept of becoming perpetual dictator is part of the concept of Julius Caesar. So (5) is analytic. In the next section I will discuss two very surprising consequences of this verdict.

CONSEQUENCES OF THE PCP

Leibniz mentions one consequence in the quotation at the start of this handout. For any analytic truth, someone who has a sufficient understanding of the subject concept would be in a position to know, on the basis of that understanding alone, that the predicate is contained in it, and hence that

the proposition is true. For example, someone who has sufficient understanding of the concept of a triangle knows, on the basis of that understanding alone, that triangles are three-sided.

Given the PCP, anyone who has sufficient understanding of the subject concept in *any* true proposition is in a position to know, on the basis of that understanding alone, that the proposition is true. So, for example, anyone who sufficiently understands the concept of Julius Caesar is in a position to know, on the basis of that understanding alone, that (5) is true. Leibniz puts the point this way in section 13 of the *Discourse* (I take his term “notion” to be synonymous with “concept”):

[T]he notion of an individual substance includes once and for all everything that can ever happen to it and [...] by considering this notion, one can see there everything that can truly be said of it, just as we can see in the nature of a circle all the properties that can be deduced from it (Leibniz, p. 12).

This is a very surprising claim. We usually think that many things can be known only on the basis of experience. For example, you might be able to know by understanding alone that pentagons have five sides, but you would need experience to learn that the headquarters of the U.S. Department of Defense (the building we refer to as ‘The Pentagon’) has five sides. But according to the PCP, all truths are (at least in principle) knowable on the basis of understanding alone. So, for example, someone who had a sufficient understanding of the concept of the headquarters of the U.S. Department of Defense would thereby be in a position to know that it has five sides. This could, in principle, be known without any experience at all.

The second consequence results from the fact that, given the PCP, whenever it is true that A is F, it could not have been true that A was not F. Why? Consider (6):

(6) Julius Caesar didn’t become perpetual dictator.

Since (5) is true, the concept of Julius Caesar contains the concept of becoming perpetual dictator. So that means that (6) means something like:

(7) The man who was named ‘Julius Caesar,’ who crossed the Rubicon, [...] who became perpetual dictator, etc. didn’t become perpetual dictator.

But (7) is a straightforward contradiction. Since (6) and (7) express the same proposition, (6) is a contradiction, and hence is necessarily false.

If a proposition is necessarily false, then it is not even possible that it should have been true. So since (6) is necessarily false, (6) is not even *possible*. Given that Caesar exists, then, it is impossible that he should fail to become perpetual dictator. But, as Leibniz himself says, this seems to “eliminate the difference between contingent and necessary truths” and suggests that “an absolute fatalism [...] rule[s] all our actions as well as all the other events of the world” (Leibniz, p. 12). In the next handout, we’ll see why Leibniz thinks that even given that (6) is necessarily false, there is room for contingency and human freedom in the universe.