ANALYSIS AND ANALYTICITY

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In this paper, I attempt to solve the paradox of analysis by eliminating certain ambiguities that have have plagued theories of property-identity and proposition-identity.

The paradox of analysis may be explicated as follows. To give an analysis of a term is to define it. Thus, in an analysis, both the term being analyzed (the analysandum) and the term doing the analyzing (the analysans) will have the same meaning, i.e. express the same concept. But if they have the same meaning, they should be intersubstitutable salva veritate, for a substitution that does not change the meaning of a sentence should not change its truth value. Unfortunately, however, they are not intersubstitutable salva veritate; e.g., "Male sibling is the analysis of brother" is true while "Brother is the analysis of brother" is false. Thus analysis contexts seem to require that the analysans and the analysandum both are and are not identical, and that is paradoxical.

The foregoing is what might be called the "metaphysical version" of the paradox, for it deals solely with the relations between the concepts involved in an analysis. The most popular version of the paradox is what might be called the "epistemological version" of the paradox, for it deals with the knowledge we gain from an analysis. The classic statement of this version of the paradox was given by Charles Langford:

> The paradox of analysis is to the effect that, if the verbal expression representing the analysandum has the same meaning as the verbal expression representing the analysans, the

analysis states a bare identity and is trivial, but if the two verbal expressions do not have the same meaning, the analysis is incorrect.[1]

In other words if an analysis is correct, it is trivial, i.e. it does not convey any real information. But if it is not trivial, i.e. if the analysans and the analysandum are not identical, it is not an analysis.

Moore argues that the only way to avoid this paradox is to admit that analyses are about expressions as well as about concepts. He writes:

> I think that, in order to explain the fact that, even if 'to be a brother is to be a male sibling' is true, yet nevertheless this statement is not the same as the statement 'to be a brother is to be a brother,' one must suppose that both sentences are in some sense about the expressions used as well as about the concept of being a brother.[2]

But to construe analysis as being about expressions is to make philosophical theories language-bound. That is, it makes translation of philosophical theories across different languages impossible. Consider the sentences:

(1) Male sibling is the analysis of brother, and (2) "Male sibling" is the analysis of "brother."

Sentence (1) is not about the expressions "Male sibling" and "brother" while sentence (2) is. A German translation of (2) would not give a German ignorant of English the same information as would a German translation of (1). But it would seem that philosophical insights should be translatable across languages. Thus if the intuition that philosophy is about concepts and not about language is to be preserved, another solution must be found.

By recognizing two distinct types of property and proposition identity, the paradox can be avoided. Properties may be either "structurally" or "compositionally" identical to one another depending on what properties they "contain." This view can be stated more precisely as follows:

1. P is a property if and only if it is possible that there is something that exemplifies P.

2. Property (concept) P explicitly contains property (concept) Q if and only if necessarily, in order to apprehend[3] P one must apprehend Q.

For example, the concept male sibling explicitly contains the concept male, for in order to apprehend the concept male sibling, one must apprehend the concept male.

3. Property (concept) P implicitly contains property (concept) Q if and only if (a) P does not explicitly contain Q and (b) necessarily, whoever has P is such that were he to apprehend Q, he would accept the proposition that all P's are Q.

For example, the concept brother implicitly contains the concept male, for necessarily whoever has the concept brother is such that were he to apprehend the concept male, he would accept the proposition that all brothers are male.

4. Property P is compositionally identical to property Q if and only if P implicitly contains every property that is implicitly and explicitly contained by Q and vice versa.

For example, the property brother is compositionally identical to the property male sibling.

5. Property P is structurally identical to property Q if and only if P explicitly contains every property that is explicitly contained by Q and vice versa.

For example, the property expressed by this token of "brother" is structurally identical to the property expressed by this token of "brother."

Analogously, propositions may be either structurally or compositionally identical to one another depending on what propositions they contain. This view can be stated more precisely as follows:

6. P is a proposition if and only if it is possible that there is someone who believes P.

7. Proposition P explicitly contains the proposition Q if and only if necessarily in order to apprehend P one must apprehend Q.

For example, the proposition snow is white and coal is black explicitly contains the proposition snow is white and the proposition coal is black.

8. Proposition P implicitly contains the proposition Q if and only if (a) P does not explicitly contain Q, and (b) necessarily, whoever accepts P is such that were he to apprehend Q, he would accept the subjunctive conditional: if P were true, then Q would be true.

For example, the proposition snow is white implicitly contains the proposition something is white.

9. Proposition P is compositionally identical to proposition Q if and only if P implicitly contains every property and is implicitly and explicitly contained by Q and vice versa.

For example, the proposition John is a brother is compositionally identical to the proposition John is a male sibling.

10. Proposition P is structurally identical to proposition Q if and only if P explicitly contains every property that is explicitly contained by Q and vice versa.

For example, the proposition snow is white and coal is black is structurally identical to the proposition coal is black and snow is white.

Kant was the first to characterize analytic statements as those in which the predicate is contained in the subject. He was also the first to draw a distinction between overt and covert conceptual containment. In the statement "All bodies are bodies," the predicate is overtly contained in the subject. In the statement "All bodies are extended," the predicate is covertly contained in the subject. Unfortunately,

his characterization of analyticity in terms of conceptual containment is rather vague. An analytic statement, he writes, adds "nothing through the predicate to the concept of the subject, but merely breaks it up into those constituent concepts that have all along been thought in it."[4] The analysis of explicit and implicit conceptual containment offered above, however, avoids this vagueness and captures, 1 believe, what Kant had in mind with his distinction between overt and covert conceptual containment.

Perhaps the notions of compositional and structural identity can be elucidated by means of an analogy. One can apprehend a concept without apprehending its constituents just as one can percieve a mosaic without perceiving each of its pieces. By changing one's focus, however, one can perceive the pieces of the mosaic. But in that case, what is before one's mind will have a different structure or pattern than that which was before one's mind when one was perceiving the gestalt of the mosaic, although it will be composed of the same parts. Similarly, when one "focuses" on or attends to the constituents of a concept, what he apprehends will be structurally distinct from what he apprehends when he "focuses" on or attends to the concept itself, although it will be compositionally identical to it.

Consider an ambiguous figure like the duck-rabbit. What one sees when one sees the duck aspect is not structurally identical to what one sees when he sees the rabbit aspect, for a duck shape is not identical to a rabbit shape. Yet those two aspects are compositionally identical, for they are composed of the same lines. Similarly, what one apprehends when he apprehends the concept male sibling is not identical to what one apprehends when he apprehends the concept brother, for one can apprehend the one without apprehending the other. Yet the two concepts are compositionally identical, for they implicitly contain the same properties.

The notion of "sameness" is notoriously vague. What the foregoing examples suggest is that the vaguenes of the phrase "apprehends the same thing" is analogous to the vagueness of the phrase "sees the same thing." When one person sees the duck-rabbit figure as a duck and another sees it as a rabbit, do they see the same thing? In one sense, yes; in another sense, no. They see the same lines, but they do not see them in the same way. Similarly, when one person apprehends the concept male sibling and another apprehends the

concept brother, do they apprehend the same thing?
Again, in one sense, yes; in another sense, no. They
apprehend the same point in logical space, as it were,
but they do not apprehend it in the same way. The
distinction between compositional and structural
identity tries to capture the difference between these
two senses of "apprehends the same thing."

The foregoing distinctions pave the way for the
following solution to the paradox of analysis:

> 11. X is an analysis of Y (where X and Y
> stand for properties or propositions) if
> and only if (a) X and Y are logically
> equivalent, (b) X is implicitly contained
> in Y, (c) X explicitly contains more
> concepts than Y, and (d) none of the
> concepts (or propositions) explicitly
> contained in X is logically equivalent to
> Y.

On this view, then, the proposition X is an
analysis of Y is true only if X and Y are
compositionally identical but not structurally
identical. In the context "Male sibling is the
analysis of brother," "brother" cannot be substituted
for "male sibling," for the concepts expressed by the
two tokens of "brother" would then be structurally
identical, and that is ruled out by condition (b).
Hence, the paradox is avoided.

The paradox arose because the type of identity
involved in an analysis was unspecified. Once it is
realized that the analysans must only be
compositionally identical to and cannot be structurally
identical to the analysandum, the paradox disappears.
The traditional view that the analysans and the
analysandum have the same meaning can be maintained as
long as it is realized that "meaning" here means the
concept or proposition expressed by a term and "same"
here means compositionally identical and not
structurally identical.

Analysis is an a-symmetrical, non-reflexive
relation. That is to say, if A is the analysis of B,
then B cannot be the analysis of A, nor can B be the
analysis of B. Analysis flows in only one direction,
so to speak. As we have seen, previous conceptions of
analysis could not account for this directionality.
This one can.

In an analysis, the analysans must be logically
equivalent to the analysandum. But there are many
properties and propositions that are logically
equivalent and yet do not stand in the relation of
analysis. For example, although the propositions 2+2=4
and 3+3=6 are logically equivalent, 3+3=6 cannot be
considered to be the analysis of 2+2=4 because 3+3=6 is
not implicitly contained in 2+2=4, i.e. one may
apprehend both propositions and yet not accept the
subjunctive conditional that if it were true that
2+2=4, then it would be true that 3+3=6 because the
truth of 3+3=6 is not conditional upon the truth of
2+2=4.

The properties of having a shape and having a size
are logically equivalent, and having a shape is
implicitly contained in having a size, but having a
shape cannot be considered to be the analysis of having
a size, for an analysis should "break down" a concept
into its constituent concepts and there is no such
breaking down here. Having a shape and having a size
are on the same level, so to speak. Condition (c)
rules out equivalences such as this, and thus preserves
the intuition that the analysans must be more complex
than the analysandum.

Although the property of being shaped and colored
is logically equivalent to the property of having a
size, is implicitly contained in the property of having
a size, and contains more properties than the property
of having a size, it still cannot be considered to be
an analysis of the property of having a size, for part
of the analysans is logically equivalent to the
analysandum. Equivalences such as this are ruled out
by condition (d).

It has often been said that in an analysis the
analysans and the analysandum express the same concept
but express it in different ways. The notions of
compositional and structural identity developed here
provide a way of making sense of this claim.

In analyzing a concept or proposition, one is
trying to make explicit what is implicitly contained in
our understanding of that concept or proposition.
Finding good analyses, however, is notoriously
difficult. Perhaps the reason that analysis is so
difficult is that our language is not rich enough to
express each concept that is implicitly contained in
the concepts we possess. Perhaps the reason is that
philosophical terms are primitive or simple and thus
cannot be "broken down" into constituent concepts.

Perhaps the reason is that philosophical terms are more like natural kind words than nominal kind words in that their meaning varies from speaker to speaker and hence cannot be analyzed. And perhaps the reason is that philosophers just have not been clever enough.

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NOTES

[1]C. H. Langford, "The Notion of Analysis in Moore's Philosophy," in The Philosophy of G. E. Moore, ed. P. A. Schlipp (LaSalle: Open Court, 1952), p. 323.

[2]G. E. Moore, "Reply," inThe Philosophy of G. E. Moore, p. 666.

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[3]To apprehend a property or proposition is to contemplate it, grasp it, conceive of it, think of it, hold it before one's mind, etc.

[4]Immanuel Kant, The Critique of Pure Reason (New York: St. Martin's Press, 1965), p. 48.