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INDETERMINACY, OPACITY AND THE IDENTITY THEORY

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1. Indeterminacy and the Identity Theory*

Consider the following argument, which I will label Argument A.

Argument: A

Premise A₁: If we cannot imagine any decisive evidence for or against P, then it is indeterminate whether P.
Premise A₂: We cannot imagine any decisive evidence for or against the claim that Jane is in mental state M.

Therefore,

Conclusion A: It is indeterminate whether Jane is in mental state M.

Arguments of this form might raise some eyebrows. But, questionable or not, this kind of move—from lack of a conceivable test, to a lack of a fact of the matter—shows

* This paper owes a great debt to Tim Kenyon, whose arguments I am concerned to rebut. It is with great pleasure that I dedicate it to him. Also, the paper contains fewer errors and unclarities thanks to the very helpful comments of an anonymous reviewer for Crítica.
up regularly in the literature.\textsuperscript{1} So, for the sake of argument, I will grant (for the moment) that this inference is legitimate. My primary concern in this paper lies elsewhere, with an extension of this argument that I will call Argument B.

**Argument B**

Premise $B_1$ (i.e. Conclusion $A$): It is indeterminate whether Jane is in mental state $M$.

Premise $B_2$: It is not indeterminate whether Jane is in physical state $P$.

Conclusion $B$: Mental state $M$ is not identical to physical state $P$.

This simple and (prima facie) persuasive argument presents no worry to those who think the grounds for mental state attributions are in all fours with the grounds for physical state attributions. They will, in the general case, be in a position to deny Premise $A_2$, and, so far as I can tell, if they deny Premise $A_2$ they have no good reason for accepting Conclusion $A$. Hence they have no reason for endorsing Premise $B_1$.\textsuperscript{2} Where there is cause for concern.

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\textsuperscript{1} Two samples: 1. "When 'the fact of the matter' about proper function is controversial—when more than one interpretation is well supported—there is no fact of the matter," (Dennett 1987, p. 300); 2. "If no conceivable test could decide between the hypothesis under which system accuracy represents $x$ and the hypothesis under which that system misrepresents $y$, then there is no fact of the matter concerning which representational state that system is really in," (Kenny 1993, p. 23). See Dennett (1990) for further examples of this type of reasoning.

\textsuperscript{2} Should there arise an exceptional circumstance in which Premise $A_2$ looks plausible, that will undoubtedly be a circumstance in which Premise $B_2$ looks implausible — again, assuming physical and mental state attribution are not evidentially unequal. Here too, then, the inference to Conclusion $B$ would be blocked.
is among that rather large group of philosophers — among them Davidson (1970) and Dennett (1987) — who maintain that: (a) many (all?) mental state attributions go beyond what the evidence does or could warrant; and (b) all physical state attributions are perfectly determinate. For, Argument A would then make many (all?) mental state attributions indeterminate. And Argument B would then seem to establish that identity claims between physical states and many (all?) mental states are false.\footnote{See Kenyon (1990) for an illuminating discussion. As he correctly points out, the problem arises for both type and token identity theories.} One can, however, get around this.

2. Opacity

The contexts There is evidence that and We cannot imagine that are both opaque. That is to say, one cannot substitute co-referential singular terms in these contexts and be sure of preserving truth. This fact can be established by means of examples.

Example one

Let us suppose, as may be the case, that the number of basic physical forces in the universe happens to be the same as the number of planets. That is:

1. the number of planets = the number of basic physical forces.

Even given this identity, the truth value of (2a) and (2b) may diverge.

2. (a) There is evidence that [the number of planets] is greater than eight.
Consider the set $\mathcal{W}$ of possible worlds that are just like the actual world in terms of what data scientists have at their disposal. In these worlds, sentence (2a) is true; because there is, in the actual world, a great deal of evidence to the effect that there are more than eight planets. But, in all the worlds in $\mathcal{W}$, sentence (2b) is false. That is because, in the actual world, current evidence suggests that there are at most four basic physical forces: electromagnetic, gravitational, strong nuclear and weak nuclear. Now, there surely are worlds within $\mathcal{W}$ in which the number of planets is the same as the number of basic physical forces — despite the evidence. In those worlds, sentences (1) and (2a) are true, but sentence (2b) is false. The lesson? One cannot substitute the singular term the number of basic physical forces for the number of planets in the context There is evidence that and be assured of preserving truth — even when these are co-referential singular terms.

There is evidence that is opaque. That’s the first big step. Here’s the final small step: I gather my conclusion holds even if one injects the word decisive into There is evidence that. Sad but true: there could be decisive evidence in favour of the number of basic physical forces being exactly four, even if there are actually eight basic physical forces. So There is decisive evidence that is opaque. 4

Example Two

Suppose that Rodney’s favourite geometric figure is the square. That is,

4 This result is initially surprising. It should become less so when one reflects that evidence, even decisive evidence, is an epistemic notion.
(3) Rodney's favourite geometric figure is the square. Whatever Rodney's actual preferences with regard to shapes, we can certainly imagine that Rodney's favourite geometric figure is the circle. Given this, (4) is surely true. Nevertheless, (5) is just as surely false.

(4) We can imagine that [Rodney's favourite geometric figure] has no sides.

(5) We can imagine that [the square] has no sides.

The lesson is the same: one cannot substitute the singular term the square for Rodney's favourite geometric figure in the context We can imagine that while preserving truth—even though, ex hypothesis, these are co-referential singular terms.

Given that There is decisive evidence that and We can imagine that are opaque, embedding the first construction within the second will produce a context that is also opaque. In brief, there is every reason to think that the context We can imagine that there is decisive evidence that is opaque too. Ditto for its negation, We cannot imagine that there is decisive evidence that.

3. Indeterminacy, opacity and the identity theory

It remains unclear how, exactly, one ought to cash out claims of indeterminacy. But whatever the correct analysis of the operator It is indeterminate whether, I feel safe in saying this: IF Premise $A_1$ is true THEN (6) and (7) are very closely connected.

(6) We cannot imagine that there is decisive evidence that ______

(7) It is indeterminate whether ______
These notions must be closely connected, if Premise
A₁ is true, because that premise says that the inability
to imagine decisive evidence is a sufficient condition for
indeterminacy.
And now the punch line: such an intimate connection,
if it obtains, is surely such that if either context induces
opacity, the other likely does as well. As I have said, (6) is
an opaque context. So, assuming Premise A₁ is true, it is
reasonable to conclude that (7) also induces opacity. But
in that case, Argument B is unsound, because it commits
the intentional fallacy: if It is indeterminate whether is an
opaque context, one cannot validly infer non-identity from
non-substitutivity salva veritate in this context.⁵
To sum up: if Premise A₁ is not true, it cannot support
Conclusion B. On the other hand, if Premise A₁ is true,
then there must be a close connection between inability to
imagine a decisive test and indeterminacy. In which case,
It is indeterminate whether is very likely opaque, because
We cannot imagine that there is decisive evidence that
is. In which case, Argument B is unsound. (It commits
the intentional fallacy.) Hence, even if Premise A₁ is true
—which I doubt— Conclusion B does not follow from
it, together with Premises A₂ and B₂. This is a happy
result for those philosophers who wish to hold the following
cluster of views:

⁵ In a word: if It is indeterminate whether truly is opaque then
Argument B is exactly parallel to the fallacious argument below:

Premise 1: John believes that Cicero was a great man.
Premise 2: It is not the case that John believes that Tully was a
great man.
Therefore,

Conclusion: Cicero is not identical to Tully.
A. (Many) mental state attributions go beyond what the evidence does or could warrant.
B. Every mental state is identical to some physical state.
C. Physical state attributions are determinate.

REFERENCES


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RESUMEN

En este artículo trato de refutar el siguiente razonamiento:

Premisa 1: Si no podemos concebir ninguna evidencia concluyente a favor o en contra de $P$, entonces es indefinido si $P$.
Premisa 2: No podemos concebir ninguna evidencia concluyente a favor o en contra de la afirmación de que Jane está en el estado mental $M$.
Premisa 3: No es indefinido si Jane está en el estado físico $P$.

Conclusión 1: Es indefinido si Jane está en el estado mental $M$.
Conclusión 2: El estado mental $M$ no es idéntico al estado físico $P$.

Al generalizarse, este razonamiento parece mostrar que nadie puede sustentar simultáneamente el siguiente conjunto de perspectivas filosóficamente comunes:

A. (Muchas) atribuciones del estado mental van más allá de lo que la evidencia garantiza o podría garantizar.
B. Todo estado mental es idéntico a algún estado físico.
C. Las atribuciones del estado físico están definidas.

Sostengo que este razonamiento —inspirado por los trabajos de Tim Kenyon— no es convincente. Aproximadamente: si la premisa 1 no es verdadera, entonces el razonamiento es falso. Por otro lado, si la premisa 1 es verdadera, entonces es indefinido si $P$, con toda probabilidad, un contexto vacío. En cuyo caso, nuevamente, el razonamiento es falso.

[Traducción: Claudia Chávez A.]