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The Indefinite Description Analysis of Belief Ascription Sentences: A Trouble with the Analysis?

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In Sunwoo (2002), I have proposed an analysis concerning propositions and 'that'-clauses as a solution to Kripke's puzzle and other similar puzzles, which I now call 'the Indefinite Description Analysis of Belief Ascription Sentences.' I have listed some of major advantages of this analysis (especially over Nathan Salmon's well-known analysis) besides its merit as a solution to the puzzles: it is amenable to the direct-reference theory of proper names; it does not nevertheless need to introduce Russellian (singular) propositions or any other new entities.

David Lewis has constructed an interesting argument to refute this analysis (and this argument will, if successful, refute Salmon's analysis as well). In this paper, I will show that this argument does not pose a real threat to analyse.

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Before we proceed to our main concern for this paper, I will give

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a summary of the discussion concerning why I have proposed the Indefinite Description Analysis of Belief Ascription Sentences and what it is.

The lesson of Kripke's well-known puzzle about belief is that we can devise a relevant situation and we can derive a contradiction from some assumptions about the situation and the following plausible principles:

(P1) If someone believes a proposition, p, and the negation of the same proposition, -p, at the same time, he/she is not rational.
(P2) If two declarative sentences have the same meaning (share all semantical elements), those two declarative sentences express a same proposition.
(P3) If a competent speaker of language L sincerely assents to a declarative sentence of L, then he believes the proposition expressed by the declarative sentence.[1)]
(P4) 'London is not pretty' expresses the negation of the proposition expressed by 'London is pretty.'
(P5) 'Londres est jolie' and 'London is pretty' have the same meaning.[2)]

Now it will suffice to show that the conception of a proposition leads to a trouble if we could think of any situation in which a rational and competent speaker of French and English is disposed to sincerely assent to both sentences, 'Londres est jolie' and 'London is not pretty' at the same time. Kripke describes such a situation. In his story, a person called Pierre is such a speaker.[3)] The details of the story do not

1) This is a 'proposition' version of Kripke's disquotational principle (Kripke 1979:112-113)

2) This corresponds to Kripke's claim that those two sentences are translations of each other. (Kripke 1979:127-130)

3) The story goes like the following: "Suppose Pierre is a normal French speaker who lives in France and speaks not a word of English or of any other language

matter as long as our analysis satisfy we are able to suffice this requirement. In other words, the following assumptions can be accepted as the moral of the story.

(A1) Pierre is rational.
(A2) Pierre is a competent speaker of French and English.
(A3) Pierre sincerely assents to 'Londres est jolie.'
(A4) Pierre sincerely assents to 'London is not pretty.'

Now it is not difficult to derive a contradiction from (P1-P5) and (A1) - (A4).4) Thus, we have a puzzle to solve.

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except French. Of course he has heard of that famous city, London (which he of course calls 'Londres'), though he himself has never left France. On the basis of what he has heard of London, he is inclined to think that it is pretty. So he says, in French, "Londres est jolie" ... Later, Pierre, through fortunate or unfortunate vicissitudes, moves to England, in fact to London itself, though to unattractive part of the city with fairly uneducated inhabitants. He, like most of his neighbours, rarely ever leaves this part of the city. None of his neighbours know any French, so he must learn English by 'direct method,' without using any translation of English into French: by talking and mixing with the people he eventually begins to pick up English. ... He learns, of course-speaking English-to call the city he lives in 'London.' Pierre's surroundings are, as I said, unattractive, and he is unimpressed with most of the rest of what he happens to see. So he is inclined to assent to the English sentence, 'London is not pretty.' Of course he does not for a moment withdraw his assent from the French sentence, "Londres est jolie"; he merely takes it for granted that the ugly city in which he is now stuck is distinct from the enchanting city he heard about in France. But he has no inclination to change his mind for a moment about the city he still calls 'Londres.' ... We may suppose that Pierre, in spite of the unfortunate situation in which he now finds himself, is a leading philosopher and logician. He would never let contradictory beliefs pass." (Kripke 1979:119-120)

4) The derivation goes as follows:

1. Pierre is a competent speaker of French and he sincerely assents to 'Londres est jolie.' (from A2, A3)
2. Pierre believes the proposition expressed by 'Londres est jolie.' (from 1, P3)
3. Pierre is a competent speaker of English and he sincerely assents to 'London

My main thesis in Sunwoo (2002) is that a sentence containing directly referential terms does not express one unique proposition; such a sentence expresses many propositions. My view is, in other words, that such a sentence expresses many non-Russellian propositions instead of expressing one unique Russellian proposition.[5] In this way, we don't need to introduce Russellian propositions, which are not available to those who want to keep (P1).

We already know that a sentence containing only non-directly-referential terms expresses a (perhaps, unique) proposition (of course, a non-Russellian proposition). Now the expression relation between sentences containing a directly referential term and propositions can be defined as follows:

(E1) A sentence containing a directly referential term, N, expresses all the propositions expressed by sentences obtained from replacing N by a non-directly-referential term denoting the referent of N.

Thus, 'Aristotle is wise' expresses the proposition expressed by 'the last great philosopher in ancient times is wise,' the proposition expressed

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is not pretty.' (from A2, A4)

4. Pierre believes the proposition expressed by 'London is not pretty.' (from 3, P3)
5. Pierre believes the negation of the proposition expressed by 'London is pretty.' (from 4, P4)
6. 'Londres est jolie' and 'London is pretty' express the same proposition.(from P2, P5)
7. Pierre believes a proposition and the negation of the same proposition. (from 2, 5, 6)
8. Pierre is not rational. (from 7, P1)
9. Pierre is rational. (from A1)

5) See Frege & Russell's Correspondences in Salmon & Soames (1988) for the distinction between Russellian propositions and non-Russellian ones.

by 'the inventor of logic is wise,' and so on. This definition can be generalized, in the two different ways, to the case of sentences containing more than one directly referential term. Let's consider only the simpler way for the time being. It is as follows:

(E2) A sentence containing directly referential terms, N_1, N_2, ..., Nn, expresses all the propositions expressed by sentences obtained from replacing N_1, N_2, ..., Nn by non-directly-referential terms which respectively denote the referents of N_1, N_2, ... , Nn

Now, what is the relationship between the expression relation and the meaning relation? Though such a sentence expresses many propositions, its meaning is unequivocally determined to be all such propositions. What it means doesn't depend on any content or intention or so on. Or if you please, we can say that it means only one thing: the set of all such propositions.

The situation is similar with the case of indefinite descriptions. 'A man' and the like are called 'indefinite descriptions' as opposed to definite descriptions. In a sense, 'a man' denotes Socrates, Aristotle, and all other men.[6] But it doesn't follow that such a phrase is

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6) When one utters the phrase 'a man,' she might have in mind a particular man. In this case, it can be said that she refers to the particular man. But we would regard it as the case of 'speaker's reference.' Under the influence of Bertrand Russell (*Introduction to Mathematical Philosophy*. London: Allen and Unwin, ch. 16, 1919) and W. V. O. Quine (*Word and Object*. Cambridge: MIT. 1960: 112-113), I think of indefinite descriptions as having a truth condition under which a sentence containing as an indefinite description is true when a relevant existential quantification is true.
Charles Chastain pointed out in Chastain (1975) "Reference and Context" (in *Language, Mind, and Knowledge*. University of Minnesota press, 1975) that there is a referential use of indefinite descriptions. But I am using "indefinite" use of

ambiguous. Indeed this is more than just similarity. My definition could be put in a different way that reveals something more than a simple analogy. We can think of the 'that'-clauses containing only non-directly-referential terms as definite descriptions that denote propositions. For example, 'that the tallest spy is handsome' denotes one unique proposition. Then we can decide the denotation of a 'that'-clause containing directly referential terms as follows:

(D1) A 'that'-clause containing a directly referential term, N, denotes all the propositions denoted by 'that'-clauses obtained from replacing N by a non-directly-referential term denoting the referent of N.

And (D2) in a similar way. So, we can regard 'that'-clauses containing directly referential terms as indefinite descriptions denoting many propositions. Thus, 'that Aristotle is wise' denotes the proposition denoted by 'that the last great philosopher in ancient times is wise,' the proposition denoted by 'that the inventor of logic is wise,' and so on. Therefore, the analysis deserves the name 'the Indefinite Description Analysis of Belief Ascription Sentences.'

Now, let's see how this definition enables us to solve the puzzles. When an indefinite description such as 'a man' appears in a sentence such as 'I met a man,' we can analyze it as follows:

(1) There is a thing x such that I met x and x is a man.

Likewise when a 'that'-clause containing directly referential terms appears in a sentence, especially in a belief ascription sentence,

(2) Pierre believes that London is pretty

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indefinite descriptions as the model of what I want to say.

we can analyze it as follows:

(3) There is a proposition p such that Pierre believes p and p is expressed by 'London is pretty'

This sentence is true according to Kripke's story, since Pierre believed the proposition expressed by, for example, 'the city called 'Londres' is pretty' and this proposition is also expressed by 'London is pretty.'

Moreover, we can analyze

(4) Pierre doesn't believe that London is pretty

as

(5) There is a proposition p such that Pierre doesn't believe p and p is expressed by 'London is pretty.'

(3) and (5) don't contradict each other. For it is possible that the proposition mentioned in (3) and the proposition mentioned in (5) might be different propositions.

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Now let's turn to the main issue of this paper: can we defend this analysis from an ingenious attack? David Lewis raised the following interesting objection.[7] Suppose that '0' and '1' (and other arabic numerals) are abbreviations of descriptions of numbers: '0' abbreviates

7) David Lewis in private communication.

'the number x such that for all y, x+y=y' and '1' abbreviates 'the successor of 0' and so on. Suppose that 'zero,' 'one,' and so on, are directly referential terms. For any sentence p, let '[p]' abbreviate the description as follows

[p] = ^{df} the x such that x=1 if p, x=o otherwise.

Now consider the sentence 'one succeeds zero.' Suppose that p is true. According to (E2), the proposition expressed by '[p] succeeds 0' is one of the propositions expressed by 'one succeeds zero.' For '[p]' has the same referent as 'one' and '0' has the same referent as 'zero.' But '[p] succeeds 0' is equivalent to p. Then, doesn't the sentence 'one succeeds zero' express all true proposition? A similar argument can be used to show that 'one succeeds zero' express all false propositions.

Is this result really a problem for the present analysis? Someone might be tempted to think that this result does not cause a problem concerning objects of beliefs for the following reason: on my analysis, from

(6) Everyone (or Fred) believes that one succeeds zero,
(7) 'One succeeds zero' expresses all propositions

it doesn't follow that

(8) Everyone (or Fred) believes all propositions.

Note that Fred believes that one succeeds zero just in case he believes at least one of the propositions expressed by 'one succeeds zero.'

This is true. But the real problem, concerning beliefs, however, is that this result entails that if someone believes any proposition, then he should, *ipso facto,* believe that one succeeds zero. That is, the problem lies in the direction from the belief of any proposition to the belief that one succeeds zero, not in the opposite direction. For example, if someone believes the proposition-that-snow-is-white, then, just by that fact he can be said to believe that one succeeds zero. This is certainly a bad reason to ascribe the belief that one succeeds zero, though it is easy for everyone to have that belief.

In other words, from (7) and

(9) Fred believes that snow is white

we can derive

(10) Fred believes that one succeeds zero.

But intuitively, Fred could believe that snow is white without believing that one succeeds zero. This result is very serious, since the same derivation is possible no matter what sentence we may put at the place of 'snow is white' in (9).

This point will be strengthened if we use a sentence that is not as easy to believe as 'One succeeds zero.' Consider the sentence

(11) One thousand seven hundred and twenty-nine is the smallest number which can be expressed as a sum of two cubes in two different ways.

For any sentence p, let [p]* abbreviate the description as follows

[p]* = ^{df} the x such that x=1729 if p, x=o otherwise.

'One thousand seven hundred and twenty-nine' has the same referent as '1729.' Suppose that p is true. Then '[p]*' has the same referent as '1729.' Therefore, the proposition expressed by

(12) [p]* is the smallest number which can be expressed as a sum of two cubes in two different ways

is one of propositions expressed by the sentence (11). But (12) is equivalent to p. So, from

(13) Fred believes that snow is white

one can derive

(14) Fred believes that one thousand seven hundred and twenty-nine is the smallest number which can be expressed as a sum of two cubes in two different ways.

If Fred is like most of us, then (13) will be true and yet (14) will be false. The similar derivations are possible no matter what sentence we may put in the place of 'snow is white' in (13). No matter what Fred may believe, he should also believe that one thousand seven hundred and twenty-nine is the smallest number which can be expressed as a sum of two cubes in two different ways.

Undoubtedly, this result is not acceptable. However, I don't believe that the unacceptability of this result shows the absurdity of the present analysis. Rather, it shows that we should not accept the following thesis.

(ET) If two sentences are equivalent, then they express the same proposition.

I call this 'the equivalence thesis.' Even though this thesis is a consequence of a promising view of propositions, the possible worlds view of propositions, this thesis should not be taken for granted. The thesis seems to imply that all logically true sentences, all mathematically true sentences, all other necessarily true sentences express one and the same proposition. So if someone believes the proposition expressed by any such a sentence then in virtue of this very fact he should be said to believe all propositions (or: the proposition) expressed by all sentences of this kind. For example, if someone believes the proposition expressed by 'two and two equals four,' then in virtue of this very fact he should, *ipso facto*, be said to believe *all* propositions expressed by the Pythagorean theorem, Goedel's theorem, (arguably) 'water is H2O,' and so on and so forth.

Moreover, once we accept the equivalence thesis, we can derive many other strange consequences. For example, suppose that someone (let's call him 'Ludwig') disbelieves (in the sense of 'denies') Goedel's theorem. He may express his disbelief by saying (and believing)

(15) If arithmetic (where it is consistent) is incomplete, then snow is black,

of course, without believing that snow is black. But (15) is equivalent to 'snow is black.' Then by the equivalence thesis he should be said to believe that snow is black. That is, we can derive

(16) Ludwig believes that snow is black

with the aid of the thesis. This point can, of course, be made using any proposition (as well as the proposition expressed by 'snow is black').

Remember the problem raised by the argument. The problem was that on the present analysis we can derive (10), believing that one succeeds zero, from (9), believing that snow is white, (where 'snow is white' can be replaced by any other sentence). But if we accept the equivalence thesis, then even without the present analysis, from

(13) Fred believes that snow is white

we can derive

(17) Fred believes that 1 succeeds 0 and snow is white,[8]

since '1 succeeds 0 and snow is white' and 'snow is white' are equivalent. If we assume essentialism, the view that numbers have their mathematical properties in every possible world no matter how they are described, then we can also derive

(18) Fred believes that one succeeds zero and snow is white

from (13). Likewise, we can also derive

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8) The scope of the 'that'-operator reaches the end of the sentence.

(19) Fred believes that one thousand seven hundred twenty nine is the smallest number that can be expressed as a sum of two cubes in two different ways and snow is white.

Now, we already seem to be in trouble. Of course, the present analysis will allow to drop the part 'and snow is white' from the 'that'-clause. But why is it so important to drop it, given that we already know from (13) that Fred has such a strong belief? That part is just reaffirming what has already been said in the premise (13).[9]

What was the role of the equivalence thesis in the original argument aimed at the present analysis? The equivalence thesis allows us to advance from

(13) Fred believes that snow is white

to

(20) Fred believes that (the x such that x=1 if snow is white, x=0 otherwise) succeeds 0.

Is this move acceptable? I believe that this step should not be

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9) The following rule is a quite plausible principle:

> whenever we can say that Fred believes that p and q, then we can say that Fred believes that p.

If we have this principle (as a general tule or as a special rule for Fred who is not very stupid), then we can say, without the present analysis, that whenever Fred believes any proposition, Fred should believe that one succeeds zero or he should believe that one thousand seven hundred twenty nine is the smallest number which can be expressed as a sum of two cubes in two different ways. But even without this rule, the equivalence thesis seems to yield a trouble.

permitted in general, as I have argued so far. Of course, there can be situations in which this move is acceptable. But to allow this move is just to ascribe Fred a belief of the proposition that 1 succeeds 0. Suppose that, concerning Fred, we can accept the move from 'Fred believes that p' to 'Fred believes that (the x such that x=1 if p, x=0 otherwise) succeeds 0.' Then that is good evidence for the claim that we already ascribe Fred a belief that 1 succeeds 0. Only such an ascription would make those moves plausible. No matter how necessary the proposition that 1 succeeds 0 may be, if Fred doesn't believe the proposition or even worse, Fred denies the proposition, a situation will be very easily obtained in which we have to say: Fred believes that snow is white but he doesn't believe that (the x such that x=1 if snow is white, x=0 otherwise) succeeds 0.

But the fact that Fred has the belief that 1 succeeds 0 is what we want to derive (from the fact that he has the belief that snow is white or any other). Indeed to admit the equivalence thesis just amounts to the supposition that Fred has the belief that 1 succeeds 0 (or the belief that 1729 is the smallest number which can be expressed as a sum of two cubes in two different ways). So it is not surprising that from

(21) Fred believes that p

(where 'p' is substituted by any sentence), we can derive

(22) Fred believes that 1 succeeds 0

or

(23) Fred believes that 1729 is the smallest number that can be expressed as a sum of two cubes in two different ways.

Indeed, we can construct the following argument without using the present analysis of 'express.' Suppose that we are given

(21) Fred believes that p

(where 'p' can be substituted by any sentence). If we assume the equivalence thesis, we can derive

(24) Fred believes that [p] succeeds 0.

Is it plausible to derive

(25) Fred believes that 1 succeeds 0

from (24)? Even though '1' and '[p]' are co-designating, Fred might not know that they are. Then the derivation would not be plausible. But, wait. Since, as said in (21), Fred believes that p, Fred can be said to have a good position to believe that '1' and '[p]' are co-designating. For '1=[p]' is equivalent to 'p' and by the equivalence thesis again we can say

(26) Fred believes that 1=[p].

So, we got what we want. Now Fred would need only a minimal logical acumen in order to believe that 1 succeeds 0 when he believes that 1=[p] and that [p] succeeds 0.[10] Once he believes that 1 succeeds

0, it is a very reasonable situation to say that he believes that one succeeds zero. If not, how else could we have a belief that one succeeds zero? Therefore, whatever proposition Fred could believe, he should be said to believe that one succeeds zero, too. Likewise, whatever proposition Fred may believe, in virtue of the very fact that he believes the proposition, he should be said to believe that one thousand seven hundred and twenty-nine is the smallest number that can be expressed as a sum of two cubes in two different ways. Because this argument is constructed without employing the present analysis, I am entitled to conclude that the source of the problem lies in the equivalence thesis.

There are many different conceptions of propositions. A theory containing the equivalence thesis might capture one of such conceptions. But the conception of propositions I now consider is surely not captured by such a theory. I am thinking of propositions as entities denoted by 'that'-clauses, including 'that'-clauses which follow the verb 'to believe.' So far, I have argued that the propositions whose identity conditions are given by the equivalence thesis don't match such a purpose. In conclusion, what Lewis' argument has shown is that my analysis doesn't go along well with the view of propositions embracing the equivalence thesis. I should have said something more about what propositions should be like. The structured entity view of proposition is better for the purpose. But it is not the case that this view has necessarily nothing to do with the possible worlds approach

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10) The equivalence thesis amounts to saying that if Fred believes Skolem-Loewenheim theorm he should also believe Goedel's theorem. It will be very strange if we accept this thesis but deny any possiblity of the minimal acumen I mentioned here.

in general. David Lewis has shown how we can set-theoretically construct structured propositions from the properties defined in terms of possible worlds. (Lewis 1986:50-57)

But is it sufficient to throw away the equivalence thesis? 'One succeeds zero' still expresses the proposition that [p] succeeds 0, for any sentence p. Is it all right? Indeed I am happy to accept the consequence. If someone has a belief-attitude to the proposition consisting of the concept that is uniquely satisfied by one and the concept that is uniquely satisfied by zero and the two-place successor relation in a relevant way, then I don't have a difficulty in ascribing him a belief that one succeeds zero. On the other hand, by saying that 'one succeeds zero' expresses all such propositions, I can assign a unique structured meaning. (Such a meaning will be a set of propositions and the structure of the meaning will be given by the common structure of the propositions that are members of the set).

It might be pointed out that so far I have only considered propositions as the objects of beliefs. How about propositions as the meanings of declarative sentences? If on my view the sentence 'one succeeds zero' expressed all the propositions, my view would be very unsatisfactory as a theory of propositions as meanings of sentences. But it will be just as unsatisfactory as the equivalence thesis. Suppose that we should admit the equivalence thesis. Then we can derive the consequence that 'one succeeds zero' expresses all the propositions, for example, including the proposition-that-snow-is-white and the proposition-that-grass-is-green. But it doesn't follow from this result that the meaning of 'one succeeds zero' is not distinguished from the meaning of 'snow is white' or the meaning of 'grass is green.' The sentence 'snow is white' still expresses only one proposition, that is, the proposition-that-snow-is-white. Therefore, whereas the meaning of the sentence 'snow is white' is given by that proposition (the proposition-that-snow-is-white), the meaning of the sentence 'one succeeds zero' is given by the set of all propositions. Indeed, the problem of the result will be that, say, 'two plus two equals four' would also express all the propositions and hence the meaning of 'one succeeds zero' will not be distinguished from the meaning of 'two plus two equals four.' But the equivalence thesis is already not able to distinguish the meanings of such necessarily true sentences. So the equivalence thesis cum the present analysis doesn't seem to be much worse than the equivalence thesis *simpliciter*.[11] Since I don't accept the equivalence thesis for the reasons we have considered and perhaps many other reasons, the undesirable result will not come out after all.

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11) It can be said that the equivalence thesis cum the present analysis is a little bit worse than the equivalence thesis simpliciter, since the former arbitrarily distinguishes the meaining of some necessary sentences. But I think that the latter is already bad enough and I don't see how this difference makes the latter much better.

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Abstract

In a recent paper, I have proposed an analysis concerning propositions and 'that'-clauses as a solution to Kripke's puzzle and other similar puzzles, which I now call 'the Indefinite Description Analysis of Belief Ascription Sentences.' I have listed some of the major advantages of this analysis besides its merit as a solution to the puzzles: it is amenable to the direct-reference theory of proper names; it does not nevertheless need to introduce Russellian (singular) propositions or any other new entities.

David Lewis has constructed an interesting argument to refute this analysis. His argument seems to show that my analysis has an unwelcome consequence: if someone believes any proposition, then he or she should, *ipso facto*, believe any necessary (mathematical or logical) proposition (such as the proposition that 1 succeeds 0).

In this paper, I argue that Lewis's argument does not pose a real threat to my analysis. All his argument shows is that we should not accept the assumption called 'the equivalence thesis': if two sentences are equivalent, then they express the same proposition. I argue that this thesis is already in trouble for independent reasons. Especially, I argue that if we accept the equivalence thesis then, even without my analysis, we can derive a sentence like 'Fred believes that 1 succeeds 0 and snow is white' from a sentence like 'Fred believes that snow is white.' The consequence mentioned above is not worse than this consequence.