

Why the semantic argument for relativism fails

0. Introduction

Relativism is the thesis that propositions – the objects of assertion and other speech acts, of belief and other propositional attitudes, and the primary bearers of truth – vary in truth value along non-modal parameters, i.e. parameters other than (possible) worlds or states of affairs, or, if you prefer, maximally or less than maximally possible ways the world could have been.¹ The *Semantic Argument* for Relativism – also known as the “Operator Argument” – proceeds from the premise that natural languages contain sentential operators which “shift” a nonmodal parameter π , via various ancillary premises, to the conclusion that propositions must vary in truth value along π . The *Standard Reply* to the Semantic Argument on the part of anti-Relativists has been to argue that any sentential operators which appear to “shift” a nonmodal parameter π are in fact quantifiers which bind π -variables.² I show that the Standard Reply is mistaken: the Semantic Argument’s conclusion follows, via the ancillary premises which are unchallenged by the Standard Reply, even from the assumption that the apparent π -shifting is always done by quantifiers which bind π -variables. I argue, however, that the opponents of Relativism should welcome the demise of the Standard Reply, because the Semantic Argument, when applied to quantifiers over putative nonmodal truth parameters, leads to an absurdly fine-grained conception of propositions, which the Relativists and their opponents presumably both reject.

1. Common ground

It is notoriously difficult to find common ground on the nature of propositions which might resolve some of the disputes between Relativists and their opponents. But in the case of the

¹ I take it that the claim that propositions vary in truth value along modal parameters is unobjectionable to anti-Relativists if they, like Cappelen and Hawthorne (2009: 1), merely insist that truth is a *fundamental* monadic property of propositions. A non-fundamental relation of *truth at* can be defined in terms of the monadic truth predicate and modal notions, e.g. as: p is true at world-state $w =_{df}$ necessarily, if the world instantiates w , then p .

² The first paper to make this move was King (2003). King, however, was not concerned with responding to the Semantic Argument for Relativism, but to an argument (which he attributed to Lewis (1980)) using the same premises, plus the additional premise that Relativism is false, for the conclusion that the semantic values of sentences cannot be propositions. King’s move has recently been deployed by anti-Relativists such as Cappelen and Hawthorne (2009: ch. 3) and Glanzberg (2011), who attack the premise of the “Operator Argument” they call “Sententiality”: that there are (non-variable-binding) sentential operators which shift a nonmodal parameter. For instances of the Semantic Argument, see Kölbel (2009: 384) and MacFarlane (2007: §2).

Semantic Argument, I believe that sufficient common ground can be found to decisively settle the question.

Whatever else propositions may be, presumably they are not in general *orthographically individuated*; merely orthographic devices, such as the index on a variable or pronoun, presumably contribute nothing to propositions expressed by the sentences in which they occur, at least in a fairly broad range of contexts of occurrence. E.g., Relativist or not, anyone who makes any serious use of the ideology of propositions presumably agrees that, relative to a context of utterance c which assigns the same semantic values to any indexicals (e.g., unpronounced free domain variables) occurring in them, sentences (1) and (2) express the same proposition.

- (1) [Every philosopher]₁ believes that she₁ is an elegant writer
- (2) [Every philosopher]₂ believes that she₂ is an elegant writer

Let us call pairs of sentences like (1) and (2) containing pronouns such that one is the result of a logical form-preserving substitution of pronoun indices in the other, *orthographic variants*. Thus, while (1) and (2) are orthographic variants, (2) and

- (3) [Every philosopher]₂ believes that she₁ is an elegant writer

are not, because they differ in logical form: the index substitution that takes us from (3) to (2) leads to 'she₁' being bound, while it is free in (3).

Anyone who is inclined to think that (1) and (2) must express the same proposition in c will presumably find the following minimal substitution principle even more certain.

- (MS) There is at least one context c and there are at least two sentences S and S' such that 1) S and S' are *distinct* orthographic variants, 2) all pairs of pronouns N_n and N_m which are substituted in S and S' have the same *semantic content* in c , 3) S and S' are *simple sentences*, and 4) S and S' express the same proposition in c .

(MS) is not, in fact, much of a substitution principle, because it licenses no substitutions. It only tells us that there is *at least one* propositional content-preserving substitution of the indices of pronouns meeting some very stringent conditions. It does not assure us that we will ever be able to find that substitution, but only that, somewhere in the vast space of metaphysical possibilities, such a substitution exists (the ' c ' in (MS) ranges over possible as well as actual contexts). And let us note how stringent the conditions are:

- 1) Since S and S' are orthographic variants, there can be no audible or legible difference between them; the only difference is at the unpronounced level of logical form.
- 2) The requirement that N_n and N_m have the same *semantic content* in c – i.e., make the same contribution to propositions semantically expressed – is stronger, at least from certain theoretical perspectives, than the requirement that they have the same referent in c . (Yet presumably even a Fregean who thinks the semantic content of a free pronoun is a sense will agree that it is *possible* for pronouns with distinct indices to have the same semantic content in the same context, and this all (MS) requires.)

- 3) S and S' are *simple sentences*, so we avert worries about arcane examples like the iterated propositional attitude reports discussed in Mates (1950), in which no substitutions seem guaranteed to preserve content.

To further appreciate the weakness of (MS), consider how things would be if (MS) were false: if (MS) were false, then no two distinct simple sentences which are orthographic variants would ever express the same proposition in any context. In rejecting (MS) one embraces an orthographic conception of propositions, which I assume anyone who takes propositions seriously will reject. I assume, therefore, that (MS) is common ground between Relativists and their opponents.

2. Relativism and shiftiness

With this in the background, let us now consider the Semantic Argument. It assumes the following:

SHIFT. If there are (in some natural language) sentential operators that shift π , then propositions vary their truth values along π .

We say that an operator O shifts π iff the truth value of $O(S)$ in a context c is not determined by the truth value of S in c but is determined by the truth values S has relative to values of π *other* than the value of π supplied by c – it is determined, in a word, by *shifting* π . For example, ‘Somewhere S ’ is true in c iff S is true at some location, ‘Some day S ’ is true in c iff S is true on some day after the day of c , and ‘Possibly S ’ is true in c iff S is true in some world accessible from the world of c . If ‘somewhere’, ‘some day’, and ‘possibly’ are sentential operators, then they are, respectively, operators that shift location, day, and world. The thought behind SHIFT is, roughly, that if a sentence S , as interpreted in a context c , is to be evaluable as true or false with respect to π s other than that supplied by c , then the semantic value S has in c had better be capable of varying its truth value along π ; and because the semantic value S has in c is the proposition S (“literally” or “semantically”) expresses in c , propositions must be capable of varying their truth values along π (see, e.g., King 2003: 206). I shall not attempt a reconstruction of this reasoning, which I reject because I reject SHIFT. Cappelen and Hawthorne (2009: ch. 3) have produced a detailed reconstruction which, if correct, makes it clear that there is much else to doubt in the Semantic Argument apart from the assumptions it appears to rely on regarding the syntax and semantics of ‘somewhere’ and the rest. Their reconstruction complements the present paper in offering a menu of choices of further assumptions to reject for those who reject SHIFT, as, I argue, both Relativists and their opponents ought to do.

3. The revenge of the Semantic Argument

Let us suppose that the Standard Reply to the Semantic Argument is correct, and that a sentence like ‘Somewhere it is raining’, which appears to result from the application of a location-shifting operator to a sentence, in fact has a logical form something like

- (4) $\exists l$ (it is raining at l)

The thought is that, if this is correct, we cannot conclude via SHIFT that propositions vary their truth values with location.

But the thought is incorrect. Quantifiers are sentential operators, and they shift something – i.e., they are not (at least not in all occurrences) vacuous. A quantifier shifts the *variable assignment* parameter. Obviously, the truth value of $\lceil \exists x \Phi \rceil$ in a context is not determined by the truth value of Φ under the variable assignment supplied by the context (see note 3); it is determined by *shifting* that variable assignment to x -variants of it. Quantifiers are variable-assignment shifting operators. Since there obviously are quantifiers in natural language, we must conclude, if we accept SHIFT, that propositions have different truth values relative to different variable assignments. The Relativist wins this round.

4. The Semantic Argument vs. Relativism

The revenge of the Semantic Argument, however, backfires on the Relativist. Let us assume a standard way of doing Relativist semantics with coarse-grained propositions, where a proposition is a set of n -tuples of indices $\langle i_1, \dots, i_n \rangle$, with each i_i a value of some π shifted by some operator. Since we have variable assignment-shifting operators (quantifiers), we must conclude, by SHIFT, that the proposition expressed by S in c is the set of ‘tuples $\langle i_1, \dots, i_n, g \rangle$, with g a variable assignment, such that S in c is true at i_1, \dots, i_n , at g , where being true at g just amounts to being true under g . Now consider any two distinct simple sentences which are orthographic variants – say:

(5) She₁ is tall

(6) She₃ is tall

with respect to an arbitrary context c .³ Obviously (5) and (6) differ in truth value under some variable assignments: (5) is true under g iff $g(\text{‘she}_1\text{’})$ is tall; (6) is true under g iff $g(\text{‘she}_3\text{’})$ is tall; so there is an h such that $\langle i_1, \dots, i_n, h \rangle$ is a member of the proposition expressed by (5) in c but not a member of the proposition expressed by (6) in c . Since c was an arbitrary context, we conclude that (5) and (6) express different propositions in every context, and therefore in particular in contexts in which ‘she₁’ and ‘she₃’ have the same semantic content. And since (5) and (6) were stand-ins for arbitrary distinct simple sentences which are orthographic variants, it follows that (MS) is false, which is absurd.

³ Here and throughout the paper I assume that a context provides, perhaps among other things, a variable assignment. This is a standard assumption in semantics as done by linguists (see, e.g., May (1985: 21), Heim and Kratzer (1998: 242), and the review of work by linguists in Stanley (2007: ch. 1)). In the most famous work on the semantics of context-sensitivity by a philosopher (Kaplan 1989), a different approach is taken: a sentence is evaluated as true both with respect to a context and a variable assignment. However, Kaplan’s formal language LD does not include expressions which are capable of having both deictic (context-sensitive) and bound occurrences, as the pronouns of natural language are. The semantics of such expressions requires contexts to supply variable assignments.

Opting for a structured-propositions view offers the Relativist no escape from absurdity: no matter what kind of structure the Relativist imposes on propositions, the phenomenon of binding forces her to reject (MS). For let $\lceil \Phi(N_n) \rceil$ and $\lceil \Phi(N_m) \rceil$ be any simple sentences which are orthographic variants such that $n \neq m$. Presumably the Relativist will agree with the rest of us that there is some quantifier phrase $\lceil Q_n \rceil$ with index n , and some context c , such that $\lceil Q_n \Phi(N_n) \rceil$ and $\lceil Q_n \Phi(N_m) \rceil$ express different propositions in c , as the quantifier phrase in the latter but not in the former is vacuous – were this not the case, no pronoun could ever become bound by a quantifier phrase. But if $\lceil Q_n \Phi(N_n) \rceil$ and $\lceil Q_n \Phi(N_m) \rceil$ express different propositions in c , $\lceil \Phi(N_n) \rceil$ and $\lceil \Phi(N_m) \rceil$ must also express different propositions in c – or else we will have a violation of the principle of compositionality⁴ – and again we conclude that (MS) is false, which is absurd.

5. Conclusion

The moral I draw from the argument of §4 is that everyone who takes propositions seriously, Relativist or not, should reject the Semantic Argument by rejecting SHIFT. Others may note that I have assumed throughout that pronouns in natural language are variables whose free occurrences are interpreted by a contextually provided variable assignment (see note 3). This is standard practice in contemporary semantics (see Heim and Kratzer 1998: 111f), but perhaps there are philosophers more enamoured of the Semantic Argument than of textbook semantics, who will see the foregoing as a reason to prefer a variable-free approach to natural language semantics. I think this would be a mistake, because I doubt that the question of Relativism can be settled by an exclusive focus on natural language. However natural language manages to solve the problem of multiple generality, there clearly are formal languages which do so with variables. Every philosopher learns the syntax of at least one such language. And presumably some sentences of such languages – say, the language L_{FA} of first-order arithmetic – are true on their intended interpretation. If so, they are true because they express true propositions, and we can use the Semantic Argument to show that the propositions expressed by L_{FA} -sentences on their intended interpretation have different truth values relative to different variable assignments, which leads us to an orthographic conception of propositions via the route familiar from §4.

⁴ There is some disagreement over which substitution principles are entailed by the principle of compositionality – i.e. the principle that the semantic value of a complex expression E (in a context c) is determined by the semantic values E 's immediate constituents have (in c) and the syntactic operation by which they are combined in E . See Szabó (1995: §1.4) for discussion. However, my argument only requires a weak substitution principle which even Szabó (1995: 26) agrees is entailed by the principle of compositionality: that if the immediate constituents of S are X and Y combined, in that order, by syntactic operation o , and the immediate constituents of S' are X and Z , combined, in that order, by o , then: if $\llbracket Y \rrbracket_c = \llbracket Z \rrbracket_c$, then $\llbracket S \rrbracket_c = \llbracket S' \rrbracket_c$, where $\llbracket \dots \rrbracket_c$ is the semantic value function. Szabó calls a more general substitution principle which entails the principle just stated an “utterly trivial rephrasing of the principle of compositionality” (*ibid.*) – all the better for my case if it is.

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